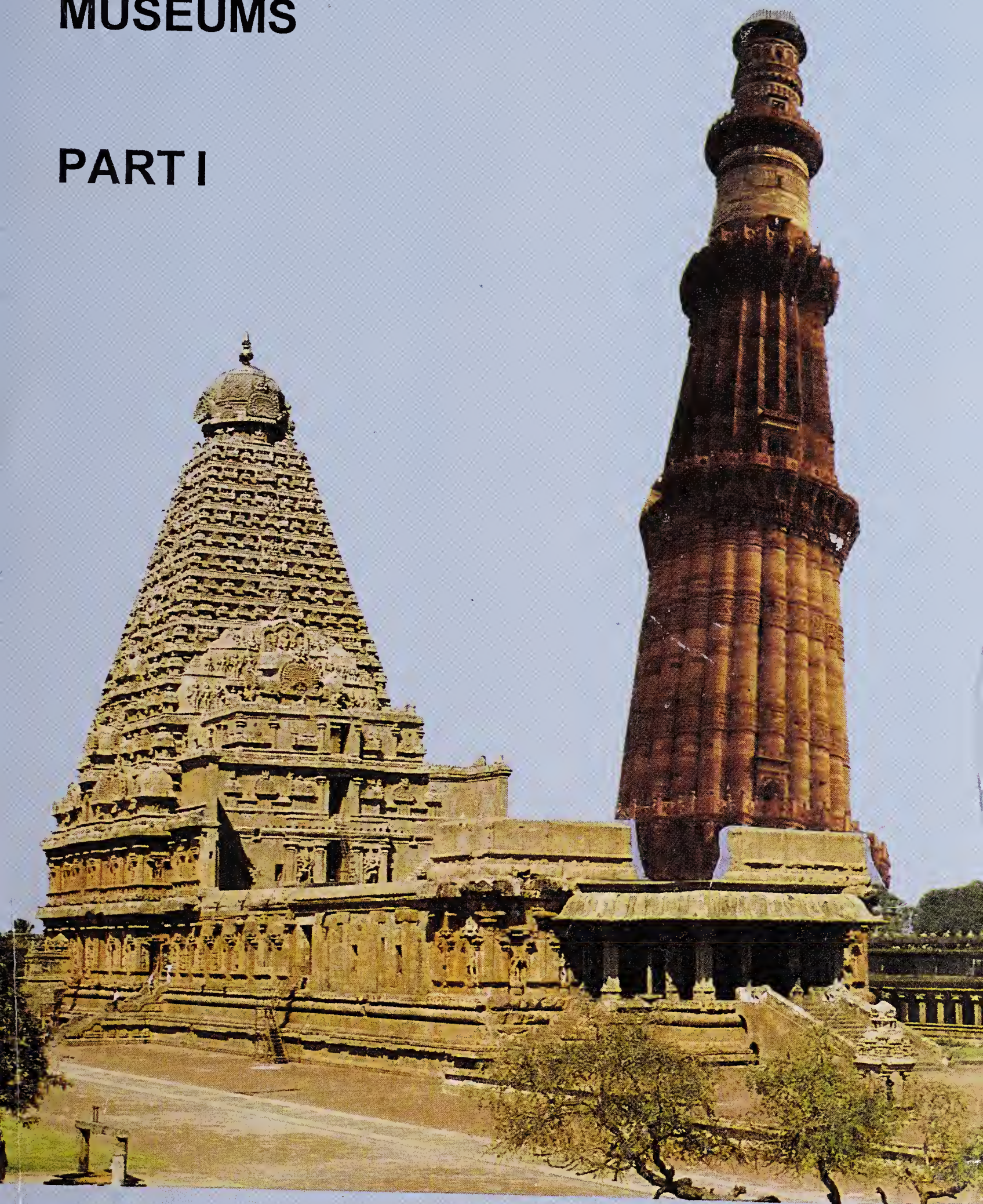
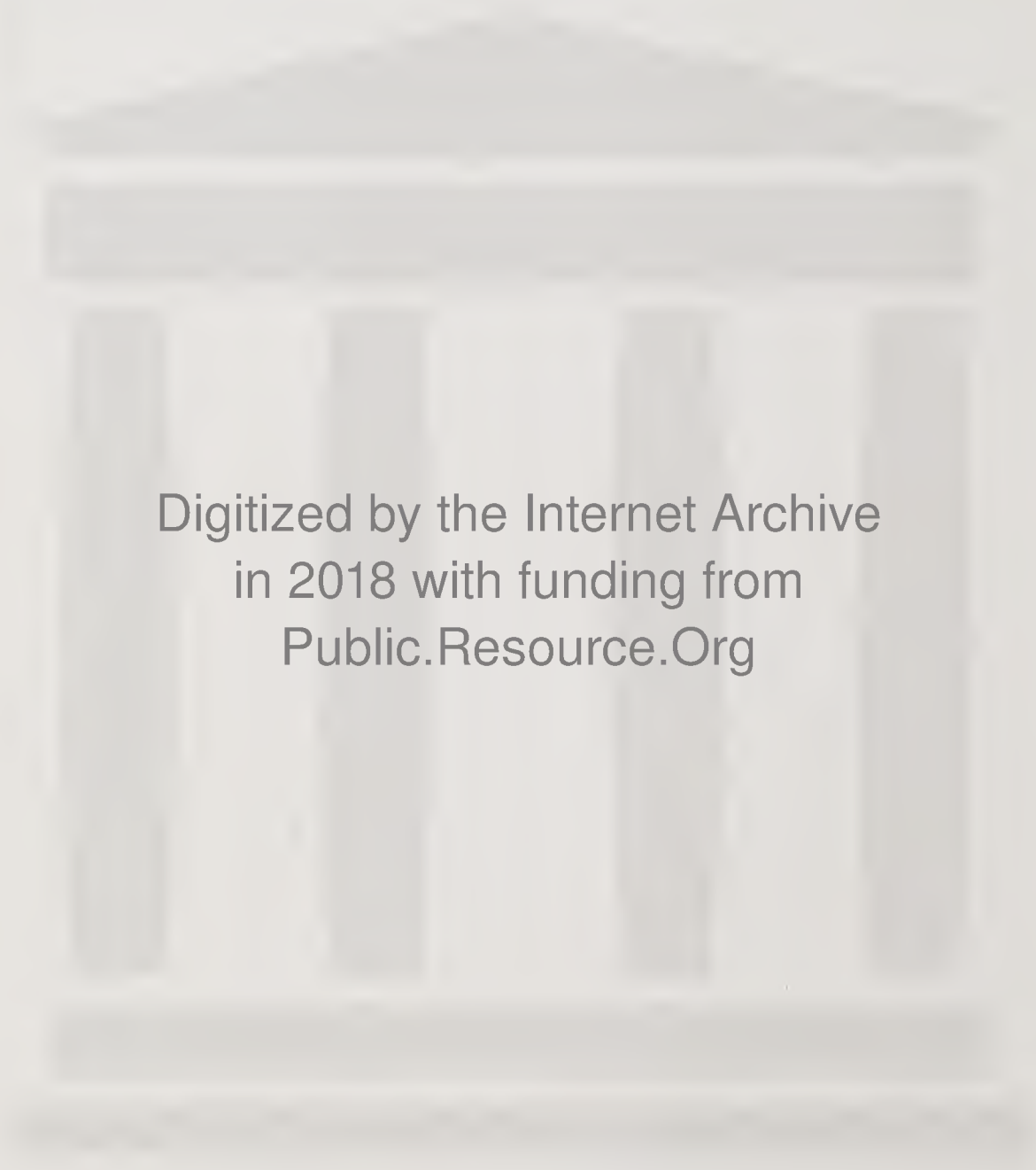


ARCHAEOLOGICAL REMAINS MONUMENTS AND MUSEUMS

PART I





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ARCHAEOLOGICAL REMAINS MONUMENTS & MUSEUMS

PART I



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CONTENTS

PAGE

PART I

I. Protohistoric remains by <i>Y.D. Sharma</i> ...	1
II. Remains of early historical cities by <i>Y.D. Sharma</i> ...	43
III. Northern Buddhist monuments by <i>Krishna Deva</i> ...	85
IV. Southern Buddhist monuments by <i>K.R. Srinivasan</i> ...	100
V. Rock-cut monuments by <i>K.R. Srinivasan</i> ...	109
VI. Northern temples by <i>Krishna Deva</i> ...	157
Plates I to LVIII ...	... at the end

PART II

VII. Southern temples by <i>K.R. Srinivasan</i> ...	191
VIII. Islamic monuments by <i>Y.D. Sharma</i> ...	241
IX. Museums by <i>H. Sarkar</i> ...	329
Index ...	357
Plates LIX to XCVI ...	... at the end

P R E F A C E

A limited edition of this book was produced by the ARCHAEOLOGICAL SURVEY OF INDIA on the occasion of the Twentysixth International Congress of Orientalists, which was held in New Delhi from the 4th to the 10th January 1964, on behalf of the Organizing Committee of the Congress, for the use of the Delegates thereto. By arrangement with the Organizing Committee, the book is now being republished by the SURVEY, with a view to making it available to persons wanting acquaintance in a general way with the ancient remains and monumental edifices of India, together with such museums as house her antiquarian relics.

The book was initially intended to be in the nature of a handbook, but later on it was felt that a somewhat comprehensive treatment of the varied and vast material would be more to the purpose than a mere sketch of sites and buildings, as that would hardly satisfy even a casually-interested tourist. Archaeological remains cannot be viewed in isolation from the culture they belong to; nor can monuments be divested of the architecture they partake of. Such considerations have resulted in the enlargement of the volume of the book over what was originally contemplated.

The book starts with the remains of the proto-historic age; the earlier, that is the prehistoric, age, till now identifiable in India almost solely by stone implements, without any but geological association, has been left out of its purview.

The book is bound in two parts, there being no other consideration in the division than convenience of handling.

The chapters in the book have been contributed by my colleagues in the SURVEY, while the work of co-ordination and editing has naturally been mine. These colleagues have also helped me in seeing the book through the press and have thus earned my thanks.

A. GHOSH
*Director General of Archaeology
in India*

ARCHAEOLOGICAL REMAINS MONUMENTS & MUSEUMS

I. PROTOHISTORIC REMAINS¹

CONTENTS

	PAGE
1. Introduction	1
2. North-west Rajasthan	3
3. The Sutlej and Beas valleys	7
4. The upper Ganga-Yamuna <i>doāb</i>	10
5. The central Ganga basin	13
6. South-east Rajasthan	18
7. Central India and the Deccan	20
A. The Narmada Valley	20
B. The Chambal Valley	22
C. The Tapti Valley	23
D. The Godavari Valley	24
8. West India	27
9. East India	33
10. South India.	34
11. Kashmir	39

1. INTRODUCTION

IT WOULD BE FUTILE TO LOOK FOR A UNIFORM pattern of culture over all parts of India at any period in her long history. Stone Age and Iron Age have been and, in fact, to some extent continue

¹ For places mentioned in this chapter, see map, fig. 1, p. 42.

PROTOHISTORIC REMAINS

to be contemporaries here. The same is true of history and protohistory. However, it was a little earlier than the middle of the first millennium B.C. when certain incidents of known date, which had lasting consequences for almost the entire country, took place, and these may be taken to mark the beginnings of the historical period of India's past. The annexation of the Indus valley, then part of India, by Darius of Persia late in the sixth century B.C. was a significant event of known date. This was also the time of the birth of two great teachers of proved historicity, Buddha and Mahāvīra, founders of Buddhism and Jainism respectively, and of the establishment of the kingdoms of Avanti, Magadha, Kosala and Vatsa, which provide some moorings to dynastic histories. To archaeologists the occurrence of the Northern Black Polished Ware (abbreviated below as N.B.P. Ware), a shiny hard pottery of superior manufacture with its centre of dispersal in the central Ganga basin, is a sure indication of the early historical period. Its beginnings are dated to the middle of the first millennium B.C., although it still awaits a convincing confirmation. Writing—often spoken of as the watershed between history and protohistory—must have been taking a shape now, if it had already not done so, as is evident from the later inscribed edicts of Aśoka of the third century B.C. and from certain short inscriptions, such as that of Piprahwa, suspected to be even earlier.

The long period of protohistory, which preceded it and served as it were as the crucible in which the main ingredients of historic civilizations crystallized, is taken to have begun about the beginning of the third millennium B.C., at any rate in certain parts. Small isolated communities now came closer

INTRODUCTION

together and contributed towards evolving certain broad patterns of living and customs. It was also during this period that certain alien folks, including the Aryans, moved into India, perhaps in several waves and at several points, setting in motion a chain of movements, clashes and upheavals, which resulted finally in whatever mutual adjustments were possible. This was no doubt the formative period for different Indian cultures, societies and institutions, and, in fact, it is this period which holds largely the key to the personality of India.

It is proposed to describe the protohistoric cultures of India regionwise, as their diversity and interrelationship are, it is believed, thus best comprehended. In this scheme of regional divisions, river-valleys naturally play an important part, for it is along these valleys that the major civilizations were born, took shape and thrived.

2. NORTH-WEST RAJASTHAN

It is for a very good reason that this account starts with north-west Rajasthan (instead of, as usual, with Panjab), with a vast expanse of sandy desert and not of fertile lands. And the reason is that this part of Rajasthan was not a desert in protohistoric times; instead, it witnessed the affluence of the Harappa civilization, the earliest urban civilization of the Indo-Pakistan subcontinent, when it first entered what now comprises India. The Aravallis, running south-west to north-east, bisect Rajasthan, geographically and archaeologically. To their north-west stretches a vast desert, in the northern part of which between the now-dried-up rivers, Sarasvatī and Drishadvatī (presently known as

PROTOHISTORIC REMAINS

Ghaggar and Chautang) lay the holy land of Brahmāvarta. The remaining southern part of the desert is watered by the Luni and its tributaries, which have not been adequately explored as yet. On the other side of the main range of the Aravallis the land is watered by the Banas and Chambal, where a chalcolithic culture arose in only slightly later times (below, pp.18-19) and was even contemporary with the Harappa culture of the north-western Rajasthan but, for all we know, shows no signs of having come into contact with it.

The antecedents of the Harappa culture continue to elude the archaeologist, but interesting evidence of a pre-Harappan occupation comes from Kalibangan, District Ganganagar, on the left bank of the Ghaggar, currently under excavation. There are two mounds here. At the smaller, western, mound the lower deposits are distinguished by a red ware, which is poorer in texture, compactness and surface-treatment than the Harappan Ware overlying it. It is thin in fabric, dull-slipped and painted in black, occasionally in combination with white, with a repertoire of essentially geometric designs (pl. III A). On most pots decoration is concentrated on the neck and shoulders, and frequently the striation-lines on the interior are not horizontal and indicate some kind of break in handling. The houses are of mud-brick, their orientation at variance with that of the later overlying Harappan structures. There are, however, chert blades, terracotta bangles and flat terracotta 'cakes'. Over these deposits a wide mud-brick wall, likely to be defensive in purpose, was raised by the Harappans soon after their arrival. Whether the western mound represents the citadel, as do the smaller western mounds at

NORTH-WEST RAJASTHAN

Harappa as well as Mohenjo-daro, is as yet far from certain.

On the larger, eastern, mound, the pre-Harappan and Harappan elements are bracketed in lower levels, while in the upper levels the former get gradually thrown into the background or are entirely superseded, suggesting thereby that both the Harappans and pre-Harappans lived side by side initially, but not for all the time. Bronze implements, chert blades, faïence, terracotta 'cakes', seals and sealings bearing the typical 'unicorn' bull and other animals and Indus script (pl. II C), with all of which we are familiar from the Indus valley sites, occur in these levels. The Harappan houses are built of sun- or kiln-burnt brick, on either side of streets (pl. I) laid in a grid pattern.

This pre-Harappan pottery is more characteristic of the Drishadvatī valley, where it was noticed earlier, and christened as Sothi culture from the name of the site where it was first recovered. It was, however, regarded later than the Harappan, not on any stratigraphic evidence (which was not forthcoming without excavation) but from its comparatively poor quality. In its dull slip and painted bands over the neck, it has some common traits with pottery from the Zhob valley, Amri and Kot-Diji and, in fact, with the meagre pre-defence pottery at Harappa (all now in Pakistan), but its relationship with the Harappa culture itself is as yet on no account determined. Some of its forms are somewhat comparable with the Harappan ones, such as the well-known dish-on-stand, while others seem to anticipate them. It may have played some part in building up the assemblage of the Harappa culture, at any rate of that phase which is found in Rajasthan, Panjab and Uttar Pradesh.

PROTOHISTORIC REMAINS

The life-span of the Harappa culture in the Indus valley, based largely on the occurrence of certain Harappan-type seals at Ur and elsewhere and on other contacts with Iraq, is generally accepted as between 2500 and 1500 B.C. When exactly the Harappans moved from the Indus valley on to the Hakra (as the Ghaggar is called in its lower reaches in Pakistan) and arrived at Kalibangan and other sites on the Ghaggar is not yet certain. But two samples from the late levels of the Harappa culture at Kalibangan have yielded Carbon-14 dates of 2095 ± 115 and 2045 ± 75 B.C., which indicates that the Harappan habitation at Kalibangan is likely to have come to an end about 2000 B.C. It may have begun four-to-five centuries earlier.

The Harappans were followed on the banks of the Sarasvatī and Drishadvatī by the users of the now well-known Painted Grey Ware, for information on whom we may draw on the excavations at Rupar (below, p. 8) and Hastināpura (p. 10), on the Sutlej and an old bed of the Ganga respectively, their habitations in Rajasthan having been only scantily excavated. Curiously enough, their settlements in Rajasthan lie away from Harappan mounds and do not overlie them, as do some of their settlements on the Sutlej and in the Ganga-Yamuna *doāb*. Bowls and dishes of fine grey ware, painted in black with bands on the edges, and with vertical, oblique or criss-cross lines, sigmas, *svastika*-symbols, spirals, circles, dots and dashes over other parts, constitute their characteristic pottery. With it also occurs a black-slipped grey ware, often fine, which, by gradual improvement and perfection, is likely to have matured in the N.B.P. Ware of the historical period. Cooking-and storage-vessels are in a dull and dusty-red ware. The people were familiar with

NORTH-WEST RAJASTHAN

semi-precious stones and glass for beads, and copper for implements. They may have known iron, but it has been traced so far only later in their life, as at Alamgirpur (below, p. 10). Their houses, which have so far largely eluded the spade, seem to have been built with mud or wattle and daub. Mutton, beef and pork formed part of their dietary. They also used the horse, which had remained unknown to the Harappans. Economically, they were largely a pastoral-agricultural people. From the fact that they had widely occupied the Panjab valleys and the Ganga-Yumuna *doāb*, which was also the scene of the activities of the early Aryans in India, it is surmised that the Painted Grey Ware people are not different from them. At Hastināpura, the Painted Grey Ware deposits are dated to *circa* 1100-800 B.C. All that may be said at present is that they may have arrived in the river-valleys of north-west Rajasthan, Panjab and west Uttar Pradesh round about 1000 B.C., judging from the fact that the remains of their culture lie substantially below those of the early historical period.

3. THE SUTLEJ AND BEAS VALLEYS

Although Harappa lies on the bank of an ancient bed of the Ravi, upstream of it no traces of Harappans have been identified so far. There is, on the other hand, a regular chain of such sites on the upper Sutlej and also a few sites on the White Bein, a tributary of the Beas. The Sutlej was probably a tributary of the Sarasvatī in early times, and before it captured the Beas it participated in the Ghaggar-Hakra and not the Indus system. The Harappans appear, therefore, to have entered the Sutlej valley *via* the Sarasvatī, and their likely route may have

PROTOHISTORIC REMAINS

lain over the dried-up bed of the Naiwal, possibly an old bed of the Sutlej.

With the possible exception of the existence of a pre-Harappan phase, as noticed at Kalibangan, the protohistoric cultures on the Sutlej followed the same pattern and order as on the Sarasvati. Rupar, a 21-m. high mound overlying the Siwalik deposits on the left bank of the Sutlej, where it emerges into the plains, has yielded a sequence of six periods, with some breaks, from the Harappa times to the present day (below, p. 48). Of these the lower two, the Harappan followed by the Painted Grey Ware, fall in the protohistoric period. A steatite seal in Indus script, impressions of seals on a terracotta lump (pl. II A), chert blades, copper implements and vessels, terracotta 'cakes', beads and bangles of faience and typical pottery—all testify to a flourishing Harappan township here. The earliest houses of the Harappans were built with river-pebbles, but soon they made use of cut-slabs of lime-conglomerate or brick, the latter agreeing in size with that found in the Indus valley. Mud-brick walls were sometimes raised on foundations or plinth-base of stones. The dead were buried in pits in an extended position, with the head generally on the north, along with funerary vessels (pl. IV), as in Cemetery R-37 at Harappa.

What exactly led the Harappans to desert the site is not known. The Painted Grey Ware people followed them in due course. The full equipment of the latter, consisting of typical pottery, including the black-slipped ware, beads and bangles of terracotta, semi-precious stones, glass and bone, bone arrow-heads, ivory kohl-sticks and copper implements, is found here. It is to be noticed that glass, which was unknown to the Harappans, seems to

SUTLEJ AND BEAS VALLEYS

have been introduced by the Painted Grey Ware people. There exists also flimsy evidence of their houses in the shape of burnt lumps of clay with impressions of reeds, which were apparently the material used in walls and roofs.

On the whole, the Harappan material at Rupar agrees with the Kalibangan assemblage, but at Kotla Nihang Khan, 2 km. south-east of Rupar, the small Harappan settlement appears to be free from the pre-Harappan element of Kalibangan and even otherwise is characterized by such pottery-forms, like the goblet with a pointed base, as occur in profusion at Harappa and Mohenjo-daro but are absent or rare in Rajasthan or on most other known sites in Panjab. Kotla Nihang Khan, therefore, appears to represent an earlier Harappan immigration and Rupar a later one.

The position of Bara, another site 8 km. south of Rupar, is difficult to determine. A dull-red slip on its pottery, with concentration of wide bands or other designs in black on shoulder and neck (pl. III B), shows a family-likeness with the pre-Harappan pottery at Kalibangan. But among points of divergence is its thickness and sturdiness. Equally noticeable is the rarity of terracotta 'cakes' and the goblet with a pointed base here. Also the source of its incised decoration on cooking- and storage-vessels is by no means certain, even though such decoration is not quite absent at Kalibangan. Seemingly Bara has, therefore, some affinity with the pre-Harappan Kalibangan and although influenced by that tradition appears to be later than Rupar.

The remains of the Harappa culture at Rupar were tentatively dated to *circa* 2000-1400 B.C., but in view of the Carbon-14 dating of Kalibangan (above, p. 6) that date may require revision. The

PROTOHISTORIC REMAINS

Painted Grey Ware here was assigned to *circa* 1000-700 B.C.

4. THE UPPER GANGA-YAMUNA DOĀB

The Siwaliks barred the march of the Harappans beyond Rupar, only small settlements having been found on the Sirsa, a tributary of the Sutlej above Rupar. They now swept east on to the Yamuna. At Alamgirpur (District Meerut) on the bank of the Hindon, a tributary of the Yamuna, the familiar pattern of the Painted Grey Ware culture succeeding the Harappan is repeated. The settlement was small but possesses the characteristic material of both the cultures. The Painted Grey Ware habitation here exemplifies a later phase of that culture, for with it is recorded iron indisputably for the first time and also present are such pottery-types and other objects, as were hitherto reported only from the levels of the N.B.P. Ware. A few sherds of a black-and-red ware also occur with the Painted Grey Ware, but these may be imports from another region (below, p. 17). Alamgirpur, however, is not the terminus of the eastern Harappan movement, for pottery with Harappan affinities has already turned up on some sites between the Yamuna and the Ganga.

The Painted Grey Ware is the dominant proto-historic industry of this region, although associated with black-slipped and red wares. When it was identified first at Ahichchhatrā, (District Bareilly, below p. 50) its stratigraphic position was in doubt, but this has been clarified by subsequent excavations. And yet the overall position in the upper Ganga basin is not wholly clear. For both at Hastināpura (District Meerut) and at Atranjikhhera (District Etah)

THE UPPER GANGA-YAMUNA DOĀB

on the Ganga and Kali-Nadi respectively, the latter itself a tributary of the Ganga, below the Painted Grey Ware lies a red ware, often inadequately fired and susceptible to rubbing off even with a mild finger-touch. It was christened as ochre-coloured ware at Hastināpura. No other material is found with it, except brick-bats reported from Atranjikhara. The excavator of Hastināpura, B.B. Lal, concluded that as a red ware with obvious likeness of character with the Hastināpura ochre-coloured ware was found by him in the trial-soundings at Bisauli and Rajpur-Parsu (in Budaun and Bijnor Districts respectively), from where among other sites in the Ganga basin certain typical copper implements, mostly in hoards, had been reported earlier, this pottery was likely to be part of the Copper Hoard culture.

But who were the users or the authors of the Copper Hoards? R. Heine-Geldern believed that these and certain other copper implements in Panjab (Pakistan) and west Asia belonged to one and the same category and were to be taken to be the traces of the Vedic Aryans, who formed part of the Indo-Aryans migrating from Caucasia, south Russia and west Iran between 1200 and 1000 B.C. Originally Stuart Piggott also believed likewise, although subsequently he took them as evidence of the colonization of the Ganga basin 'by refugees and displaced persons from Panjab and the Indus valley during the time of the break up of the Harappa empire and the coming of the raiders from the west'. Lal, on the other hand, concluded that these objects could be associated neither with the Harappans nor with the Aryans, for the specialized types, such as the shouldered celt, harpoon, antennae spear-head, hooked spear-head and anthropomorphic

PROTOHISTORIC REMAINS

figure, were typologically different from the typical Harappan implements. Besides, their metal was copper, while the Harappan implements were made of bronze. Since the bar-celt had a parallel or a prototype in stone in certain regions inhabited by the aboriginal tribes and the harpoon bore resemblance with barbed spear-heads noticed in some cave-paintings in Mirzapur District, again a tribal region, Lal concluded that the Copper Hoards were manufactured by a people inhabiting the Ganga valley before the arrival of the Aryans, and these were possibly the Proto-Australoid aborigines.

Subsequently, while the Ganga canal was being diverted for the construction of a hydroelectric power-house, at Bahadarabad (District Saharanpur), 13 km. west of Hardwar, a pottery with a family-likeness to the so-called ochre-coloured ware and a Copper Hoard (pl. V) were discovered in the diversionary channel. By the time the site was taken up for a regular examination by the present writer, a major part of the ancient settlement, that had yielded the pottery and copper objects, had been thrown up, but the same pottery and certain stone tools were recovered 5·6 m. below the ground in systematic cuttings against the banks of the canal.

The Bahadarabad pottery is red, thick and inadequately fired and rubs off easily. It compares well in texture and fabric with the ochre-coloured ware of Hastināpura. But whereas the latter yielded only a couple of shapes, the former supplied several shapes, some of which, interestingly enough, are common with the Harappa pottery. In fact, the ware rubs off owing to inadequate firing and the effect of long water-logging. Its cultural affiliation could be assessed on typological affinity and not merely on its texture and fabric, which is deceptive.

Its affinity with the Harappa pottery, although limited, suggests that it might well have been manufactured by the last remnants of the Harappans in the Ganga basin before they sunk into what may at present be described as an oblivion. A broken bronze object from Lothal, a Harappan site on the western coast of India (below, p. 27), described as a celt by the excavator, may possibly be the head and part of the trunk of an anthropomorphic figure. This would indicate the association of the anthropomorphic figure either with the Harappans or with some other culture contemporary with it. At any rate, it seems unlikely that the primitive aborigines possessed a knowledge of metallurgy advanced enough to manufacture the specialized types included in the Copper Hoards.

Hastināpura was the capital of the Pāṇḍavas, heroes of the *Mahābhārata*, and, according to the Purāṇic tradition, Nichakshu, a descendant of the Pāṇḍavas, abandoned Hastināpura as a result of a flood and subsequently settled at Kauśāmbī. The excavator of Hastināpura believes that this flood may be identical with the one which brought about the end of the Painted Grey Ware habitation at Hastināpura and which has left its scars on the mound (pl. VI A).

5. THE CENTRAL GANGA BASIN

There is no definite evidence at present of a habitation earlier than the Painted Grey Ware in the central Ganga basin, although there seems no reason why such a phase should not be evidenced by exploration in future. At Kauśāmbī, on the northern bank of the Yamuna, the site of an extensive town of historical period associated with the

PROTOHISTORIC REMAINS

life of Buddha, a decadent grey ware with paintings in black is preceded by a sturdy red ware and a black-and-red ware, but the former, in spite of its alleged affinities with the protohistoric pottery of Navdatoli in central India and certain Harappan and post-Harappan wares in western India, is as yet without any moorings, for the parallelism is based solely on shape and does not take texture, fabric and absence of painting into account. Since, however, it underlies the impressive defences of an early date (pl. VI B) and continued even after their construction, it must be of high antiquity. The Painted Grey Ware occurs, however, at Śrāvastī (District Bahraich), another town where Buddha passed several years at a monastery, and at Sohagaura (District Gorakhpur), the former on the Rapti and the latter at the confluence of the Rapti and Ami.

The first two periods of Kauśāmbī, both preceding the introduction of the N.B.P. Ware but respectively characterized by a sturdy red ware and a decadent painted grey ware, are dated by the excavator to *circa* 1165-885 B.C. and 885-605 B.C., working back from the twentyfourth structural phase taken to date to *circa* A.D. 515 and allowing a span of seventy years for each structural phase. These periods, however, appear to be highly antedated. The earthen rampart, revetted with a thick battered brick veneer (pl. VI B) and later associated with a corbelled drain, was built during Period I and recalls similar features in the citadel at Harappa. It was repaired and added to several times, guard-rooms, bastions, etc., being constructed in the second one of its five main building phases during the historical Period III of the town.

It may be recalled that in north-west Rajasthan, Panjab and upper Ganga-Yamuna *doāb*, with the

CENTRAL GANGA BASIN

Painted Grey Ware also occurs a black-slipped ware (above, pp. 8-10), while some sherds of a black-and-red ware were found at Alamgirpur (above, p. 10, and below, p.17). While the Painted Grey Ware appears to go out of use in the eastern part of the central Ganga basin, the black-slipped and black-and-red wares assume prominence and, to some extent, seem to take over the tradition of painting the designs which were hitherto confined to the Painted Grey Ware. At Śrāvastī and Sohagaura some sherds of the black-slipped ware bear such paintings in buff or cream, although they are much too restricted in range. At Sohagaura and Sonpur (District Gaya), the latter on the Jamunai, an artery of the Ganga system, the black-and-red ware bears such paintings.

Usually somewhat coarse, but sometimes fine, black-slipped and black-and-red wares occur among the lowest deposits at Kauśāmbī, Rajghat, Prahladpur (both in District Varanasi), Śrāvastī, Sohagaura, Sonpur and Chirand (District Saran), all on the arterial system of the Ganga. It is only in the upper horizons of these deposits that the N.B.P. Ware makes its first appearance. There are, however, no indications of an advanced cultural prosperity in these levels, such as brick-built houses and artistic objects, except at Kauśāmbī. Instead, often microliths are found in them in small quantities, e.g., at Rajghat, Prahladpur, Sonpur and Chirand. The picture is confused but would appear less so if it is realized that the central Ganga basin was the meeting-point of several traditions.

The black-slipped ware at Sohagaura may be a part of the Painted Grey Ware culture. On other sites, where it is coarse and may reveal further differences, it appears to be associated with the coarse

PROTOHISTORIC REMAINS

black-and-red ware and microliths, the source of which lies perhaps in the Vindhya to the south of the Ganga. Here microliths occur in plenty, on open surface and in rock-shelters, some of them bearing paintings. The rock-shelter near Moraina (District Mirzapur), recently excavated, yielded a wide range of microliths and a burial but little pottery. But both pottery and microliths are reported from the megaliths at the foot of the hill locally known as Hathinia on the right bank of the Chandraprabha (District Varanasi), which may possibly indicate the next stage in the life of the microlith-using people in these parts. Coarse dull-red, black-slipped and black-and-red wares, perhaps both hand-made and wheel-turned, occur in these megaliths. There is no evidence of iron in them, but evidence of gold-wash exists on a terracotta finger-ring. There were also some animal bones, but no human ones. The megaliths in the Jangal-Mahal range are generally similar, although no microliths or bones have been found in them, in spite of there being no dearth of microliths on the surface. To what extent the microliths in the Hathinia region may be regarded as integral with the ritual of the megalithic burial needs, therefore, further verification.

At least the later phase of the Vindhyan microlithic culture and the contemporary culture in the central Ganga plains were obviously in some kind of contact. Some of the Vindhyan pottery-types, such as the legged bowl with perforations at the bottom and the conical lids, occur also in the black-slipped and red-and-black wares in the plains. It is noticed that on some of the sites in the central Ganga basin the black-and-red ware is crude and incipient in its lower levels, suggesting a gradual perfection. On the other hand, it does not appear

CENTRAL GANGA BASIN

to be a local manufacture in the upper Ganga-Yamuna *doāb*. What perhaps happened was that vessels in this ware were carried to such places as Alamgirpur by pilgrims and travellers, much in the same way as in later times utensils of the N.B.P Ware found their way to distant corners.

At Kauśāmbī, Rajghat, Prahladpur, Sohagaura, Sonpur and Chirand the black-and-red ware is also sometimes found painted with simple linear designs in white. The tradition of painting the black-and-red ware with designs in white was firmly established at Ahar in south-east Rajasthan (below, p. 18), but it appears doubtful if there is at present a definite case for influence on the central Ganga region from that quarter, particularly because if black-and-red ware were to be painted, the natural colour that would suggest itself would be white or cream, and, as such one does not necessarily have to postulate a borrowing from another region merely on the basis of the colour of the painting. At the same time, the possibility of the tradition of white painting having reached the Yamuna over the Chambal from Rajasthan and then having travelled on to the central Ganga basin cannot be ruled out.

To return to the megaliths. There are in the Vindhya several types of megaliths, such as cist with capstone, cist covered by cairn, cairn enclosed by circle, cist of dressed stone with capstone, and stone-circle with an upright in the centre. Generically they are one with the megaliths in south India (below, p. 36), but typologically and culturally they must be distinguished from the latter. Apart from other contexts, the Vindhyan megaliths have no iron appendage and must be earlier than the southern ones.

PROTOHISTORIC REMAINS

6. SOUTH-EAST RAJASTHAN

The protohistoric cultures of north-west Rajasthan have been described earlier (p. 3). To the south-east of the Aravallis the land is watered by the Banas-Chambal system and is quite fertile. Here a rich protohistoric culture flourished as illustrated by a wide distribution of its remains and the excavations at Ahar, (ancient Āghāṭa), near Udaipur, and Gilund, 72 km. north-east of Ahar.

At Ahar, on the bank of a river of the same name partaking in the Banas system, the 13-m. thick accumulations of habitation fall into two periods: protohistoric and early historic, with a long gap between them. The characteristic ceramic of the protohistoric period, divisible into three phases, A, B and C, is a black-and-red ware, painted in white with dots, lines or circles. A bowl with incurved or straight sides, a shallow dish-on-stand and a globular jar with high, narrow neck constitute the main types in this pottery; the storage-jar and cooking-vessel are red or black and decorated with incised or applied designs. The distinctive feature of Phase A is the occurrence of pots in cream-slipped and buff wares, absent from the later phases. Similarly, the additional occurrence of black-on-red, blotchy grey and lustrous red wares characterizes Phase C. The houses are built of mud-brick, their walls resting on stone rubble, either in foundation or on plinth-base. Copper was the metal in use. A few microliths were also found, but it is almost certain that they did not form part of the protohistoric cultural equipment. There are beads of terracotta and semi-precious stones, the former more plentiful. The animal terracottas comprise the bull, ram, elephant, dog and rhinoceros, while the human figurines have

SOUTH-EAST RAJASTHAN

a pinched nose. There are large hearths, with two or four cooking-positions. Animal bones attest to a diet that included meat, while querns and rubbers were used for pounding the grains.

Based on Carbon-14 determinations, the proto-historic period of Ahar, may have lasted from 1800 to 1300 B.C. This fits in with Carbon-14 dates for two other sites with which Ahar appears to have had contacts. The shapes of the cream-slipped and buff wares agree with the protohistoric pottery of Navdatoli dated between the seventeenth and fifteenth centuries B.C. (below, p. 22), while in Period I B was found a single sherd of the Jorwe Ware, dated from Nevasa between the fifteenth and thirteenth centuries B.C. (below, p. 25). Among the additional wares found at Gilund, on the Banas, are a black-on-cream and a red ware painted in polychrome. Otherwise, with some minor variations, Gilund confirms the picture obtained from Ahar. It is likely, however, to have had an earlier beginning, particularly because unlike Ahar, microliths are here an essential equipment of the protohistoric cultures as in central India.

The antecedents of this protohistoric culture of south-east Rajasthan remain unresolved and call for further investigation. Certain correspondences are no doubt noticed between the pottery from Ahar, and Navdatoli, while both may have analogues in pottery from sites in Iran. For instance, the goblet on a hollow tall stand and a bottle-like vessel occur at Tepe Hissar, while the double bowl-like jar is found at Shah Tepe. Some contact may, therefore, be certainly indicated. But if we are to imagine that south-eastern Rajasthan or central India was colonized by people from Iran, much firmer evidence would have to be looked for.

PROTOHISTORIC REMAINS

7. CENTRAL INDIA AND THE DECCAN

The protohistoric cultures of central India flourished in the valleys of its four main river-systems. Microliths, copper, beads of semi-precious stones, black-and-red and black-on-red wares, houses of wattle and daub and burials in urns or pits are some of their common characteristics. There are mainly two traditions in the painted red ware: that of Navdatoli on the Narmada and of Jorwe on the Pravara, a tributary of the Godavari. The existence of mutual contacts between south-east Rajasthan and central and west India is also evident. Within this framework, we may now view briefly the cultures of these river-systems.

A. THE NARMADA VALLEY

Navdatoli and Maheswar (District West Nimar), on the southern and northern banks of the Narmada facing each other, provide the story of the course that civilization took on the Narmada. Two main periods, a protohistoric and an early historic, are identified at Navdatoli. At Maheswar habitation commenced contemporaneously in protohistoric times, but, with a major break after *circa* A.D. 500, continued till late medieval times (below, p. 72).

Copper, microliths, beads of semi-precious stones and terracotta, and a red-slipped ware, usually painted in black, which is now commonly described as the Malwa Ware, combine to give an identifiable form to the protohistoric culture at Navdatoli and Maheswar. This culture suggests, however, four phases. In addition to the Malwa Ware, a white-painted black-and-red ware and a white-slipped ware, painted in black or vermilion with the same designs as on

CENTRAL INDIA AND THE DECCAN

the Malwa Ware, with which it also shares most of the shapes, occur in Phase I. The black-and-red ware disappears in Phase II. Another black-on-red, i.e., the Jorwe Ware of Godavari valley (below, p. 24), appears in Phase III and continues in Phase IV, which is generally marked by a degeneration in all the existing ceramics. Bowls and dishes, with or without stem, are the two characteristic shapes in the Malwa Ware and in the associated white-slipped and black-and-red wares. The large number of microliths are dominated by blades, although the lunate, trapeze, scraper and flake with 'crested guiding ridge', also occur. There are beads of steatite, faïence, semi-precious stones, shell and copper.

Navdatoli appears to have been a populous habitation. Its houses, square, oblong or round on plan, with passages between them, were built with bamboo-matting and posts, plastered with mud and white-washed with lime. Perhaps the roofs were also built with bamboos and reeds laid over with mud. The people ate wheat, rice and several other grains, which are produced in the region till this day.

Certain shapes in pottery, such as the concave-sided carinated bowl in white-slipped ware from Phase I, the channel-spouted bowl in the Malwa Ware from Phase III (pl. VII A) and the stemmed bowl (pl. VII B), which occurs in the earliest levels, seem to resemble the pottery from Sialk. Such parallels with Iranian pottery are also noticed at Ahar, as already mentioned (above, p. 18), and also at other sites like Nagda, Bahal and Prakash and indicate a close Iranian contact with central India. That this took the form of an Aryan immigration from Iran into central India, as the excavator believes, is certainly possible but would need further confirmation, as already stated (above, p. 19).

PROTOHISTORIC REMAINS

Samples from the protohistoric deposits of Navdatoli were dated by Carbon-14 method both by the University of Pennsylvania and the Tata Institute of Fundamental Research, Bombay. The dates of the latter would place the beginnings of the protohistoric period at the beginning of the seventeenth century and its end about the end of the fifteenth century B.C.

B. THE CHAMBAL VALLEY

The Painted Grey Ware had penetrated into the Chambal system, perhaps over the Yamuna, but the characteristic protohistoric culture of this system goes with the central Indian order, with copper, microliths and the typical Malwa Ware. Nagda (District Ujjain), on the east bank of the Chambal, revealed three periods, the lowest chalcolithic. The houses here were built of mud-brick and the possibility of one of the structures being part of a bastion cannot be ruled out. The same pottery and other equipment were noticed in chalcolithic levels at Awra and Manoti (District Mandasor.) At the former site was noticed a white-painted black ware, and at the latter sherds of white-painted black-and-red ware.

At Eran (District Sagar) on the Bina, a tributary of the Betwa, which ultimately joins the Yamuna, the thick deposit is divided into four periods (below, p. 70), the lowest of which is protohistoric, and shares all the equipment of the chalcolithic cultures of central India, including the white-painted black-and-red ware. A grey ware with paintings in black or red also occurs. Channel-spouts occur late in the period. Towards the end of the chalcolithic culture, but well within it, the settlement was enclosed by a

wide mud-rampart and a moat outside it, except on the riverside. On the basis of the similarity of the pottery from these sites with that from Navdatoli, the beginnings of protohistoric habitation at these sites could also be dated approximately to the seventeenth century B.C., the Carbon-14 determinations for Eran exhibiting several contradictions.

C. THE TAPTI VALLEY

Microliths and pottery characteristic of the central Indian chalcolithic culture have been picked up on a large number of sites along the banks of the Tapti. At Prakash (District West Khandesh), on the confluence of the Tapti and Gomai, four periods were identified, the lowest being protohistoric and containing microliths, copper and the Malwa Ware. A fine grey and a coarse grey wares, the latter painted in ochrous colour, also occurred.

Bahal (District East Khandesh), on the river Girna, a tributary of the Tapti, revealed five periods, the lowest of which, again, contained chalcolithic material. This period was divided into two sub-periods, A and B. Sub-period A contained a thick grey ware, its urn-shape reminiscent of the Brahmagiri urn, and a thin grey ware painted on the lips in ochrous red and hand-made storage-jars decorated with incised and applied designs. The Malwa Ware and spouted vessels of the Jorwe type occurred in Sub-period B, along with a burnished grey ware and black ware painted in white. Microliths and beads of terracotta, shell and paste were found in both phases.

Tekwada, opposite Bahal across the river Tapti, supplemented the picture of the chalcolithic culture in this region, for here were noticed some fractional

PROTOHISTORIC REMAINS

urn-burials and a burial in pit. The associated pottery consisted largely of a red ware painted in black, and evidently contemporaneous with Period I B of Bahal. But, significantly enough, a black-and-red ware, some of its sherds painted in white, was also present. Opposite Prakash across the Tapti, similar fractional burials were noticed at Korat. Whether these burials and their black-and-red ware will help in working out a relationship between them and the south Indian megalithic burials (below, p. 36), is yet to be seen.

D. THE GODAVARI VALLEY

Nasik and Jorwe on the Godavari system have revealed the existence of a chalcolithic culture which shows certain differences from the Narmada pattern. At Nasik, on the south bank of the Godavari, were identified deposits of four periods, the lowest of which yielded microliths in association with a red ware of ochrous colour occasionally painted in black (below, p. 25). At Jorwe (District Ahmadnagar), on the north bank of the Pravara, a tributary of the Godavari, some bronze celts had come to light earlier. A regular excavation established its occupation only during the protohistoric times. Microliths and a red ware, sometimes imperfectly fired and often painted in black, but sometimes also stamped or incised, particularly on larger pots, constituted the main material of the culture. Although floral or animal designs are not altogether absent, linear and geometrical patterns form the main decoration in painting here. The most common types are a concave-sided bowl with round base (pl. VII C), a globular jar with short concave or long vertical neck and a spouted funnel-necked jar.

CENTRAL INDIA AND THE DECCAN

Cups, dishes, basins, jars and lids form other types. A few of these types also occur at Nasik in the chalcolithic period, although for the most part the pottery there is largely plain and of poor fabric.

It is, however, Nevasa, on the northern bank of the Pravara, which has yielded fuller details of the sequence of cultures in the Godavari valley. Excluding the prehistoric period, there are four periods at Nevasa, the lowest yielding microliths and implements of copper. The pottery is well-burnt with a red matt surface, often painted in black. Some of the pottery shows a thick orange-to-red slip, as in the Malwa Ware. The major types, including a spouted jar (pl. VII D), resemble those at Jorwe. There is also evidence of a grey ware, sometimes painted in red, and a black-and-red ware.

The dead were buried in urns, if children, and in pits, if adults, as on the Tapti (above, p. 23). The houses were built with grass-mixed clay and strengthened with reed; their floors were rammed with clay or lime, and the roofs laid possibly with reeds or bamboos covered with clay. Some clay-lined oval or oblong pits, found usually filled with ash, may have served a ritualistic purpose. There also existed unlined pits with post-holes on the periphery. But it could not be ascertained if they were used as dwellings.

Among three samples from the top levels of the protohistoric period at Nevasa, two have been dated by Carbon-14 to *circa* thirteenth century B.C. On the basis that the Jorwe Ware also occurs at Navdatoli (above, p. 21), the beginnings of the period may perhaps be assigned to the fifteenth century B.C. or even earlier.

Diamabad (District Ahmadnagar), on the northern bank of the Pravara, revealed a chalcolithic

PROTOHISTORIC REMAINS

settlement, divisible into three phases. A coarse grey ware, reminiscent of Brahmagiri I, occurred in Phase I. In Phase II occurred the Malwa Ware, while the Jorwe Ware made its appearance in Phase III. The remains of houses and burial-practices here were in general agreement with those at Nevasa.

The river Wardha, part of the arterial system of the Godavari, was also within the zone of the central Indian and Deccan chalcolithic culture. For at Kaundinyapura (District Amraoti), the habitation starts with copper, steatite beads and a black-painted red ware and is succeeded by a black-and-red ware occurring with beads of semi-precious stones. The black-and-red ware needs further investigation in view of the occurrence of megaliths not very far from the site.

Although the river Bhima is a tributary of the Krishna system, a chalcolithic culture also flourished on its banks, particularly in its upper reaches. At Chandoli on the bank of the Chod, a tributary of the Bhima, a single-culture site revealed all the equipment of the Godavari chalcolithic culture, with typical pottery, microliths, copper objects, houses of reeds or bamboos plastered with clay and provided with lime floors, lined pits containing ash and a clay cylinder and burial-urns. Apart from the Malwa and Jorwe Wares, the pottery included plain and red-painted grey, coarse red, cream-slipped and black-and-red wares.

It will be seen that even though there are several ceramic traditions in the chalcolithic period in central India and the Deccan, they were in mutual contact, and the essential pattern of life was homogeneous. The Jorwe Ware may perhaps have originated a little later than the Malwa Ware, for where both these wares occur, the former is higher in

CENTRAL INDIA AND THE DECCAN

horizon. Besides, Carbon-14 tests indicate that the protohistoric period at Nevasa came to an end in the thirteenth century B.C., whereas the top levels of the protohistoric horizon at Navdatoli are dated to the fifteenth century B.C.

In central India there is evidence of the protohistoric period gradually merging into the early historical, for on a large number of sites the black-and-red or black-slipped wares continue into the early historical period, in which the N.B.P. Ware is introduced in upper levels. The details of the process of this transmutation are, however, yet to be studied, particularly because on the sites excavated so far, there is often a long gap between the protohistoric and early historical periods.

8. WEST INDIA

The position in western India is by no means easy to comprehend at present. This part of the country has, however, recently come into prominence owing to the discovery here of the Harappan settlements. Unlike its eastern extension in Panjab and Uttar Pradesh, the end and transmutation of the Harappa civilization in this part of the country make a reasonable story.

The Harappans appear to have reached the western coast of India by sea. Lothal (District Ahmabad), a comparatively large Harappan town, probably a provincial metropolis, lies about 3 km. from the Bhogavo river, which joins the Sabarmati, before emptying itself in the Arabian Sea, and about 16 km. from the nearest sea-point. The long occupation of Harappans here, resulting in the accumulation of a 6.5 m. high mound, is divided into two periods, A and B, without a break and with four phases in

PROTOHISTORIC REMAINS

the former. Period A represents the mature Harappa culture in its heyday, while Period B marks its later, somewhat decadent, continuation, which is approximately analogous with Period II B of Rangpur (below, p. 30). Almost all the known equipment of the Harappa culture is present at Lothal: inscribed steatite seals, stone weights, measuring-instruments of shell, clay sealings (pl. II B), pottery, terracotta 'cakes', ornaments of semi-precious stone, human and animal clay figurines, chert blades and bronze implements. Apart from the plain and painted red and buff wares, typical of the Harappa culture—the paintings containing animal-motifs which are absent in the Indus valley and were included here perhaps from the local fauna—pots were even burnt by inverted firing to produce a black-and-red ware, which, on the whole, appears to be different from the chalcolithic black-and-red ware of Rajasthan and central India. The discovery of a copper figurine furnishes evidence of metal-casting. The inhabitants made their living by agriculture, trade and even fishing, as suggested by copper fish-hooks. But in Period B the degeneration manifests itself not only in quality but also by limitation of the range of pottery-shapes and other objects and the disappearance of the animal figure from steatite seals. The goblet, beaker and perforated jar go out of use in Period B, while new types, like the bowl with a blunt-carinated shoulder and dish without carination, singly or on squattish stand, become popular. While the crane, stag, peacock, sparrow and snake formed the animal-motifs on the painted pottery of Period A, the deer, bull and peacock figured on the pottery of Period B. Long chert blades were now replaced by short parallel-sided blades of jasper and agate. A broken bronze object described as a

celt resembles the head of an anthropomorphic figure featuring among the Copper Hoards of the Ganga valley (above, p. 13). Even the houses in Period B show signs of re-use of earlier material, improvisation and absence of drains.

In Period A both mud-brick and kiln-burnt brick is used in houses, the former on a larger scale. The houses are provided with fire-places and bath-rooms and are lined on both sides of streets. Paved drains from the houses end in a soakage-jar. The drains are sometimes connected with covered public drains along the streets. A 50-m. long drain was found connected with eight bath-rooms at different points through subsidiary drains. Wells (pl. VIII A), private and public, supplied water. The streets were laid on a chess-board pattern and divided the town apparently into blocks. A systematic town-planning under some kind of municipal authority is, therefore, clearly suggested.

Lothal was subject to frequent floods and, therefore, soon after their arrival the Harappans raised mud-brick platforms, sometimes faced with a burnt-brick veneer, to secure their houses against floods. These platforms were raised and repaired repeatedly, and often even the houses were built on them.

Standing on a 4·5-m. high platform and built of sun-burnt bricks, one of the large structures consists of twelve square blocks, four on one side, and three on the other, with an 80-cm. wide channel between the blocks. At the north end of each channel was noticed a small drain of kiln-burnt bricks, while the red surface of side-walls and tops of blocks indicated a burning-operation or conflagration. The excavator takes this structure to be a kiln, where 'cakes', sling-balls and sealings were burnt in the

PROTOHISTORIC REMAINS

channels, as these were found here in large numbers. Gordon Childe regarded it as a record-room, where documents secured with sealings were stored. The purpose of the building is not quite clear, and the possibility of its being a small granary cannot be ruled out.

Another important structure at Lothal is a brick-built rectangular dockyard, 218×37 m., complete with a spill-channel (pl. VIII B), and a 7-m. wide inlet-channel connected with the Bhogavo, over which the boats appear to have been brought from the sea. Evidence of overseas trade with the Persian Gulf islands is provided by the discovery of a Persian Gulf (Bahrein) seal portraying a double-headed dragon flanked by a gazelle on either side (pl. II D).

The cemetery at Lothal is situated in the north-western corner. The burials in pits, with head on the north, are provided with funerary vessels, as at Harappa and Rupar (above, p. 8). The presence of two skeletons in some of the graves is unique. It may be remarked that a double-burial with two skeletons face-to-face has also been found in a megalith at Yelleswaram, opposite Nagarjunakonda, on the bank of the Krishna (below, p. 38).

Several samples of Lothal have been dated by Carbon-14 method. The middle levels of Period A are dated to *circa* 2000 B.C. and the lower levels of Period B to *circa* 1800 B.C. The entire occupation at Lothal, including Period B, may perhaps, therefore, be dated to *circa* 2200-1700 B.C.

Rangpur (District Surendranagar), on the Bhadar, about 50 km. south-west of Lothal, takes up the thread and reveals the later story of the Harappans. Remains of three periods are found here: microlithic, Harappan and post-Harappan, designated Periods I, II and III respectively. The microliths, of geometric and non-geometric forms, but unassociated

with any pottery, lie on a gravel-bed. The Harappan deposits are divided into three Phases, A, B and C, all of which contain material with Harappan affinities, such as characteristic pottery, terracotta 'cakes', copper objects and beads of semi-precious stones. A black-and-red ware also occurs throughout, as at Lothal.

But a gradual transmutation is also perceptible from Sub-period II A to Period III, noticeably in pottery. The characteristic shapes, like the dish-on-stand, convex-sided bowl, handled bowl and perforated jar, occur both in Sub-periods II A and II B, but other shapes, such as the goblet and beaker, go out of use in the latter. The fabric of the pottery also becomes coarser. In Sub-period II C new motifs in painting appear, such as the deer, duck and a bull with 'x'-shaped horns. Coarseness of fabric continues in Sub-period II C, but a new technique of burnishing is introduced, producing a lustrous red surface. In fact, it is the Lustrous Red Ware produced by burnishing with which the transmutation becomes apparent, while other objects also indicate a change in content and emphasis.

The metamorphosis is complete in Period III. The black-and-red ware continues, but it is the Lustrous Red Ware which now holds the ground. A terracotta figure of horse, an animal unknown to the Harappans, was also found in Period III.

Rangpur has been excavated so far vertically only to obtain the cultural sequence. Houses of mud-brick, with drains of kiln-burnt brick, and floors of hemp-mixed lime, have been noticed, but sufficient details of the lay-out of the town and structures are not available in the absence of a lateral excavation.

Rangpur has not been dated on any independent evidence, but two considerations have weighed with

PROTOHISTORIC REMAINS

the excavator in arriving at a chronology for Rangpur: first, that the 'brand' of Harappa culture even in its initial stages at Rangpur is indicative of a late phase of the culture as existing in the Indus valley, which is apparently its home, and, second, that Rangpur was perhaps occupied by the Harappans from Lothal, after they, or at least some of them, were forced to evacuate owing to floods there. The excavator has, accordingly, dated Period II to 2000-1000 and Period III to 1000-800 B.C.

Prabhas Patan (District Junagadh), near Somnath, where the entire deposit is divided into six periods, confirms the above picture generally. The two lowest periods here are chalcolithic. But even Period I, divided into A and B, indicates perhaps a stage contemporary with Period B of Lothal although containing certain influences from another direction. Period I A, has no confirmed Harappan affinity. But the pots are slipped in grey or red and contain incised, but not many painted, patterns. There are also segmented faience beads and microlithic blades. In Period I B both buff and red wares exist, the latter in a larger quantity. In Period I B the painted designs become more popular, but while the dish-on-stand, handled bowl etc., indicate the Rangpur Harappan tradition, the bowl painted in panels indicates some contact with the Malwa country. In Period II, which is to be regarded as equivalent to Rangpur II C, there is a transition to the Lustrous Red Ware.

Rojdi (District Rajkot), on the Bhadar river, has revealed three periods, the lowest being proto-historic. This period is divided here into two phases A and B. Among important shapes in Phase I A are the convex-sided bowl, handled bowl, perforated jar and dish-on-stand. The houses are built with

WEST INDIA

mud-brick and rest on mud-brick platforms raised for protection against the river. There exist also a coarse corrugated ware, microliths, copper and faïence. In Phase I B there is a greater variety in painting and also the introduction of a white-painted black-and-red ware. The houses are built with mud on rubble-foundations. Some kind of Lustrous Red Ware appears in Phase I B.

9. EAST INDIA

The inclusion of east India on the protohistoric map of India is very recent. On several sites on the river Ajay, a black-painted red ware and a black-and-red ware, sometimes painted in white, were noticed. Not merely the wares, but certain shapes in them also suggested parallels with south-eastern Rajasthan and central India. The position is still nebulous, but in the Pandu-Rajar-Dhibi at Pandu (District Burdwan), on the south bank of the river, perhaps two main periods may be identified, one protohistoric and the other early historical, a sample from the former yielding a Carbon-14 date of 1012 $\pm$ 120 B.C.

Hand-made grey and red pottery with impressions of husk and small fragments of a black-and-red ware, along with a single fractional burial, were noticed in lower levels of Period I. In the upper levels was identified a shiny red ware, sometimes with a brownish surface, plain or painted in black, or rarely in cream. A stemmed bowl, recalling the one from Navdatoli (pl. VII B), is one of the types in the painted red ware with brownish surface. The black-and-red ware, often painted in white, included examples of channel-spouted bowl characteristic of central India, particularly Navdatoli (pl. VII A).

PROTOHISTORIC REMAINS

Bands, triangles, ladders, chevrons and other geometric designs, constitute the main repertoire of patterns. Microliths, including flakes with 'crested guiding ridge', and copper ornaments, such as beads and bangles, formed other equipment. There is some evidence of houses being built with wattle and daub and being plastered. The dead were buried in urns or in pits, and some of the funerary vessels are in the black-and-red ware. During the course of this period a large-scale conflagration took place, traces of which are recognized in a regular band of ash. The upper levels of this period also yielded some polished celts and a mother-goddess figurine in grey terracotta, with splayed hips and pin-hole decoration.

Apart from the black-on-red and black-and-red ware, even a grey ware preceding these wares has been noticed in central India, e.g., Bahal (above, p. 23). The burials are also generally in the same tradition. Whether these analogues arise from a mutual contact between eastern and central India or from a common source is yet to be seen.

10. SOUTH INDIA

The results of the excavations at Brahmagiri (District Chitaldrug) in Mysore in 1947, although vital and for the first time offering a reasonable picture of the early cultures of south India, had perhaps oversimplified the nature of the pre-megalithic cultures in south India. In all, a sequence of three cultures was identified there: Polished Stone Axe culture divided into two phases, Megalithic culture and the so-called Āndhra culture of historical times. Polished stone axes with pointed-butt, crude microliths, scanty copper and a coarse, grey, hand-made

SOUTH INDIA

pottery formed the main material of the first culture. In its earlier phase there occurred also some painted or incised sherds with a red or buff slip. With the later phase were associated burials in urns for infants and extended burials in pits for adults, which correspond in general, but not in detail, to the burials at Nevasa (above, p. 25), Tekwada (p. 23) and Nagarjunakonda. It may be recalled that even the thick grey ware at Bahal has some correspondence with the pottery from Brahmagiri.

Subsequently the excavations at Sangankallu (District Bellary), Piklihal (District Raichur), and T. Narsipur (District Mysore), the latter on the Kaveri, revealed that the basal neolithic culture of the south was a microlithic one which later embodied pointed-butt axes and pottery, perhaps some of the latter from the Deccan. At Maski (District Raichur), in Period I occurred microliths, copper and beads of semi-precious stones, with dull-grey, pinkish-buff, incised grey and red-slipped painted wares, confirming in outline the Brahmagiri pattern. No polished stone axe was recovered from these levels, although they were available in plenty on the surface. Besides confirming the general sequence already obtained at Brahmagiri, Maski, etc., the excavation at Piklihal, like Nagarjunakonda, was particularly useful in revealing details of the life of the neolithic people in the south. With the polished stone axes a thick burnished grey ware, sometimes incised, occurred also at T. Narsipur. Also present were clay 'neck-rests'. But what imparts significance to the site is the occurrence in the same levels of a thin burnished grey ware with the lips painted in red ochre, as at Bahal (above, p. 23), and of pieces of the Jorwe Ware. The Polished Stone Axe culture of the south is, therefore, evidently chalcolithic, and, in spite of its contacts with the

PROTOHISTORIC REMAINS

central Indian one, differs from it in details. The users of these stone axes were, however, no longer mere hunters but raised cattle and practised agriculture. Valuable light on their cattle-raising activity is provided by the excavation at Utnur (District Raichur), where the ash-mounds, the sites of the cattle-pens of these people, reveal a cycle of accumulation and burning of the dung and other material. A charcoal sample from here has yielded the Carbon-14 date of 2295 $\pm$ 155 B.C.

The chalcolithic culture in the south, with its (neolithic) Polished Stone Axe element, is succeeded by the iron-using megalithic culture, which is not so far dated earlier than the third century B.C. Although the rest of the country had by now stepped well into the historical period, south India was still in some sense in a protohistoric stage, for the megalithic culture remained untouched by the cultural trends associated with the historical period over the rest of the country. In fact, the megalithic culture is still enigmatic, for little is known as yet of the everyday life of the megalith-builders. Chronologically they are not removed from the people who raised *stūpas* and religious establishments in about the second century B.C. at such places as Amaravati, and yet the two types of monuments have nothing in common in their art and architecture. The N.B.P. Ware found its way to the capital of Dhanakataka in the neighbourhood of Amaravati but has not been reported so far from a burial or habitation-site of the megalith-builders.

Built of large stone, the megaliths are sepulchral monuments consisting of burials or graves. They have now come to light even in the Vindhya, south of the Ganga (above, p. 17) but in south India they

are spread practically all over and occur as far north as Nagpur.

Typologically they present a wide range, such as (a) a dolmenoid cist, a chamber of stone slabs, covered by a capstone and surrounded by a single or double stone circle, (b) a cairn-circle, consisting of a cairn or heap of stones over a burial pit, an urn or zoomorphic sarcophagus and surrounded by a stone circle, and (c) a transepted cist, with an antechamber, in which a port-hole communicates with the cist divided into two parts, the cist being often covered by a cairn and surrounded by a stone circle. There are several variations of these types. Since the stone used is local, dressed laterite has been used in the northern lateritic region of Chingleput and in Kerala. To the above types may be added barrows over urns or sarcophagi and burials in pits, sarcophagi or urns without a superstructure above or circle around them.

Some of the megaliths in Kerala are quite different. There are (a) multiple dolmens, some with port-holes, within a single stone circle, (b) port-hole cists, consisting of chambers of granitic slabs sunk in scooped laterite, some with a bench in the interior, (c) urn-burials marked by a capstone and enclosed within a stone circle, (d) menhirs, or single upright slabs over an urn-burial, (e) alignments of menhirs, (f) umbrella-stones or *topi-kals* or *kudai-kals*, as known locally, and consisting of four clinostats crowned by an umbrella-shaped stone (pl. IX A), (g) hood-stone with the umbrella-shaped stone resting directly on the ground, and (h) multiple hood-stone with a circle of clinostats without a capping-stone. There are also rock-cut caves, consisting of single or multiple chambers scooped into the rock and used as tombs.

PROTOHISTORIC REMAINS

Among the megaliths or associated burials excavated in south India at different sites so far are dolmenoid cists (pl. X A), cairn-circles over a pit, or sarcophagus or sarcophagi (pl. X B), urn-burial covered by a capstone and enclosed within a stone circle and burials in pits, urns or sarcophagi without a megalithic structure. These are at Brahmagiri (District Chitaldrug), Maski (District Raichur), Sanur, Kunnattur, Amirthamangalam (District Chingleput), Sengamedu (District South Arcot) Jadi-genhalli (District Bangalore), Nagarjunakonda (District Guntur), Yelleswaram (District Nalgonda), T. Narsipur (District Mysore) and Porkalam (District Trichur). There is a wide variation in the details of burials, largely fractional, except when in pits where the skeletons are often extended. At Yelleswaram, two skeletons were found lying face to face one over the other. Its sociological significance is as yet anybody's guess in view of lack of sufficient material, the only parallel coming from Lothal (above, p. 30). The two common factors of all the burials are the presence in them of funerary vessels of black-and-red ware and implements of iron. The habitations of the megalithic people have also yielded the same black-and-red pottery and iron implements.

Megaliths of several types, including those with port-holes, occur in several countries in the Atlantic and Mediterranean littoral, and they are dated in these regions between 2000 and 1500 B.C. A black-and-red ware, with certain shapes resembling those in the south Indian megaliths, also occurs in the graves in Nubia, dated to earlier than 1000 B.C. Chronologically, therefore, there is a vast gap between the western megaliths and Nubian graves on one side and the south Indian megaliths on the

SOUTH INDIA

other; the presence of iron in the latter also indicates a cultural advancement.

But the recent excavations of the megaliths in the Vindhya (above, p. 17) and earlier reports of such monuments in the Aravallis, near Jaipur and at Fatehpur-Sikri, may narrow down this chronological gap. For the Vindhyan monuments yield no trace of iron and appear for all purposes to be chalcolithic and earlier than the south Indian ones. The identity of the megalithic folk in India is controversial, but in the south they were perhaps not different from the Dravidian-speaking people. A full picture in terms of movements of people, ideas and traditions, explaining the differences and resemblances between the megalithic monuments in different regions, in and outside India, is, however, yet to emerge.

11. KASHMIR

From the south to extreme north is a big jump, but is justified by considerations of context, for in Kashmir, at the earlier-known but incorrectly-assessed site of Burzahom, 24 km. north-east of Srinagar in the same District, a neolithic culture is seen to be succeeded by a megalithic one, as in south India. Four periods have been identified here. The inhabitants of Period I used hand-made pottery with shades of grey, dull-red, brown or buff, with a burnished black surface, and polished tools of stone and bone, the latter particularly remarkable, but without any firm parallels yet as an assemblage. The dish, sometimes with provision for a stand, bowl, a globular pot, jar and funnel-shaped vase were among the common types of pottery. There were also some mat-impressed pots. The inhabitants

PROTOHISTORIC REMAINS

lived in pits dug into the *karewa*-bed. They are circular or oval on plan, wide at the bottom and narrower at the mouth, and are plastered with mud. Some of them are provided with cut steps and others with niches. Two of these pits were found connected by an arched passage. The largest pit excavated so far measured 2·75 m. in diameter at the mouth, 4·57 m. on the floor and 3·96 m. in depth. Charcoal, ash, pottery and tools were found in these pits. Post-holes occurred on the periphery of some of the pits, suggesting some kind of roofing-arrangement with wooden posts and thatch of reed and birch, the charred remains of which with burnt clay were found in some of the pits. Stone hearths and shallow storage-pits near the mouth of pits suggested that the pit-dwellers shifted to the surface in the summer.

In Period II, the dwellings were built with mud and mud-brick, and now often the mouths of filled pits were consolidated with mud and thin coat of red ochre and used as floors for the new dwellings over them. The pottery and tools of stone and bone become now refined, but there was no other substantial change. The bone tools of this period consisting of short daggers, points, awls, antimony-rods, chisels, needles with eyes and harpoons are particularly remarkable (pl. IX B). The discovered stone tools cover polished axes, harvesters, polishers, chisels, and mace-heads, all typologically different from the neolithic tools of south India. Two burials, one primary and another secondary, came to light in the closing stages of this period.

The essential pattern of life changed with Period III, when large menhirs were erected in deep pits cut into the floors of the dwellings of Period II. A rubble-wall, forming roughly a semi-circle on plan, also belonged to this period. The earlier pottery

KASHMIR

was now on the decline, a coarse but wheel-turned red ware came additionally into use. No burial associated with these megaliths was noticed. The site was occupied again in early historical times (Period IV), with which we are not concerned here.

Period I at Burzahom has yielded two Carbon-14 dates: 1850 ± 130 and 1540 ± 110 B.C, which indicate that the northern neolithic culture is perhaps later than the southern neolithic one.

Y. D. SHARMA



FIG. 1

II. REMAINS OF EARLY HISTORICAL CITIES¹

CONTENTS

	PAGE
1. Introduction	43
2. Rupar	48
3. Ahichchhatrā	50
4. Hastināpura	52
5. Kauśāmbī	53
6. Rajghat	57
7. Rajgir	60
8. Patna	63
9. Vaiśālī	66
10. Ujjain	68
11. Eran	70
12. Maheswar and Navdatoli	72
13. Nasik	74
14. Nevasa	75
15. Tamluk	77
16. Bangarh	78
17. Chandraketugarh	79
18. Sisupalgarh	81
19. Arikamedu	83

1. INTRODUCTION

AMONG THE PEOPLES OF THE BRONZE AGE IN India, only the Harappans enjoy the distinction of being one who can be described as urban. In fact, their cities were deliberately planned and, in some respects, could serve as models even in

¹ For places mentioned in this chapter, see map, fig. 1, p. 42.

EARLY HISTORICAL CITIES

later times. Other protohistoric peoples, contemporary or later, lived in what could only be described as villages, large though some of them were, and were, in fact, on the way to growing into towns. In the north, in spite of fairly thick débris of the habitations of the Painted Grey Ware people, their houses are difficult even to identify; much less could they lay any claim to being recognized as components of cities. In central India, at Navdatoli, the plans of the protohistoric reed-cum-mud houses have been identified (above, p. 21), but the settlement can hardly be described as a town. Earthen ramparts and moats are known to some of these peoples, as at Eran (above, p. 22), but that alone is not sufficient to make a city.

In fact, it is difficult to define a city or to enumerate all its essential features. A planned lay-out, regular roads and streets, public drains, fortifications, markets, temples, monasteries, residences of the royalty and the nobility and, above all, houses of a reasonable standard are perhaps some of the elements which should distinguish an ancient city. In India, till recently the existence of kiln-burnt brick houses distinguished the town from the village, and this could serve as a yardstick even in classifying older habitations. Gymnasia, stadia and theatres are an essential feature of Greek cities, but not of the Indian ones.

The growth of a city presumes some kind of concentrated authority, be that of a king or an institution. Such authority came into being with the amalgamation of scattered communities under a common ruler and consequent growth of kingdoms, with the ruler's place of residence serving as the capital. Among early kingdoms were those of Avanti, Magadha, Vatsa and Kosala, and their

INTRODUCTION

capitals among the earliest cities. The formation of *janapadas*, or states, some of which are mentioned in early literature and sixteen of which are distinguished as *mahā-janapadas*, or 'major states', was another factor which transformed the rural pattern of life into an urban one. The growth of prosperity, trade and communications, too, gave the necessary fillip for enlarging smaller habitations into cities. Cities also grew around sacred places, and seven such sacred cities find mention in literature. Cities were often founded on the banks of rivers, not merely because they afforded easy means of communication or convenient supply of water but also because they were regarded as holy.

Several city-sites, some of them mentioned in literature, have been excavated in India. But few have been exposed laterally on a large scale to produce a full coherent picture. Nor has it been possible to trace the growth of a small habitation into a city by stages, although this could be achieved with extensive and planned horizontal excavations. In Panjab, finds of seals, sealings, coins and extensive remains of brick-built structures would entitle many a site to the status of a city, but these have not been adequately excavated. The excavation at Rupar (below, p. 48) too was limited in area, but it unfolded a successive series of structures and the wide retaining-walls of a large tank (pl. XI A).

In the Ganga-Yamuna *doāb* the excavated cities of Ahichchhatrā (below, pp. 50) and Hastināpura (pp. 52) are mentioned in literature. Housing-activity continued over a long period at these sites, while the excavation at the latter, although limited, demonstrated the rise of a town anew after its destruction

EARLY HISTORICAL CITIES

first by a flood, and at a later date by an extensive conflagration. The excavations at the sites of the other ancient cities, such as Mathura, were directed towards uncovering the remains of religious establishments and recovery of sculptures and other objects without an eye on the habitation aspects.

The central Ganga basin was the home of Vatsa and Magadha kingdoms. Several of its cities figure prominently in literature, and some of them are associated with the life of Buddha. Kauśāmbī (below, p. 53), Vārāṇasī (modern Rajghat, p. 57), Rājagṛiha (modern Rajgir, p. 60) Pāṭaliputra (modern Patna, p. 63) and Vaiśālī (p. 66) are some of the excavated cities in this region. Among these, the beginnings of Kauśāmbī and Vārāṇasī extend almost into the protohistoric times.

The ancient kingdom of Avanti lay in central India. Ujjayinī (modern Ujjain, below, p. 68), referred to in the *Periplus of the Erythraean Sea*, and Vidiśā served as its capital at different times. In fact, even Māhishmatī (identified with modern Maheswar, p. 72) lays a similar claim and was the southern capital of Avanti. In central India and the north Deccan, the rivers Narmada and Godavari have been regarded as sacred as the Ganga and Yamuna in north India, and some of the ancient cities were located on their banks, e.g., Māhishmatī on the Narmada, and Nāsikya or Nāsika (modern Nasik, below, p. 74) on the Godavari, the beginnings of both extending into the protohistoric period. On most of the excavated sites in this region there is a long gap between the protohistoric and early historical occupations and constitutes at present a kind of dark age. Eran (ancient Airakīṇa, below, p. 70) was no doubt an important town in the Gupta period, but the urban aspects of its historical period

INTRODUCTION

have not been investigated, the present interest being directed towards its protohistoric culture (above, p. 22). Cities in this region also had trade contacts with Rome, as evidenced by the Red Polished Ware, derived from the Samian Ware, coins and occasional finds of other antiquities. Both in central and western India, it is in the early centuries of the Christian era that the habitations seem to take on the character of a town.

In eastern India, the ancient port of Tamruk (below, p. 77) is referred to in literature and is also mentioned by Ptolemy under the name of Tāmalites. The excavation here yielded the Rouletted Ware and other Roman pottery, beautiful Śunga terracotta figurines and remains of a deep stepped tank. But the site is too disturbed to yield a complete lateral picture. Bangarh (below, p. 78), ancient Kōṭivarsha or Devīkoṭa, and Chandraketugarh (p. 79) provide, however, a sampling of the dwellings and articles of everyday use in this part of the country.

In the upper region of the Eastern Ghats, examples of fortified townships may be noticed at Jaugada and Sisupalgarh (below, p. 81), both known for the edicts of Aśoka, and the latter identified with Tosali of the edicts and Kaliṅganagara of Khāravela's inscription in the neighbouring Khandagiri and Udayagiri hills.

In the Āndhra country, famous cities existed on the river Krishna in early historical times. Such are Nagarjunakonda and Amaravati, both better known for their Buddhist establishments (below, p. 104). Some idea of habitation and material equipment in the Sātavāhana times is provided by the excavations at Brahmagiri, Isila of Aśoka's local edicts, and several other cities. In peninsular India, Arikamedu (below, p. 83) has revealed fascinating

EARLY HISTORICAL CITIES

evidence of trade with Rome and remains of several structures, including a ware-house.

Now follows a brief description of some of the excavated city-sites.¹

2. RUPAR

Rupar lies on the left bank of the Sutlej in Ambala District at the point where the river sweeps into the plains from the hills. The site was excavated by the Archaeological Survey of India from 1953 to 1955, under the direction of Dr. Y.D. Sharma.

Six periods have been identified at Rupar from Harappa times to almost the present day, with occasional gaps. The first two periods, covering the Harappa and Painted Grey Ware cultures, have been dealt with earlier (above, p. 8).

A new settlement (Period III) sprang up here by about 600 B.C., and a coarse grey pottery, clearly devolved from the Painted Grey Ware tradition, with which it shares many characteristic shapes, was now in use. Associated with it is a homogeneous assemblage of the N.B.P. Ware and plain red wares. These earliest historical levels, dated to *circa* 600-200 B.C., also yielded punch-marked and uninscribed cast coins, copper and iron implements and an ivory seal inscribed in Mauryan Brāhmī characters. The fine workmanship and the well-known polish associated with the Mauryans is to be seen here on a small scale on a polished disk minutely carved with figures and motifs associated with the cult of the goddess of fertility (pl. XVI B), recalling similar stones from Taxila, Patna and elsewhere. Slabs of *kankar*-stone set in mud-mortar were used for

¹ The author has adapted some of these descriptions from his article 'Exploration of historical sites', *Ancient India*, no. 9 (1953), pp. 116-69.

buildings in this period as in the Harappa times, although houses of mud and kiln-burnt bricks were by no means rare. A 3·6-m. wide burnt-brick wall, traced to a length of about 75 m., proceeds in a curve at the exposed ends and in all likelihood enclosed a tank, which collected water through inlets (pl. XI A). The upper levels of this occupation are characterized by soak-wells lined with terracotta rings.

The next occupation (Period IV) covers the rule of the Śuṅgas, Kushans, Guptas and their successors, from *circa* 200 B.C. to A.D. 500, and reveals successive building-levels. There is no dearth of datable objects in these levels, such as the Indo-Greek, tribal and other coins. In the upper levels were found a large hoard of copper coins of Kushan and Gupta rulers, including a gold issue of Chandragupta-Kumāradevī type. There are terracotta figurines in Śunga, Kushan and Gupta styles, comprising, among others, *yaksha* figures with cherubic expression (pl. XV A) and a beautiful seated figure of a lady playing on the lyre reminiscent of Samudragupta's figure in a like position on his coins. A set of three silver utensils of ritualistic use, although Greek in type, shows Gupta craftsmanship in its chased decoration. A number of terracotta sealings in characters of the fourth-fifth centuries provide the upper date for the period. The pottery of these levels is for the most part red and is frequently decorated with incised or impressed motifs, natural or religious. Periods III to V are fairly rich in dwellings, with houses of stone and mud-brick. The full plans of these houses could not, however, be exposed owing to the vertical nature of the excavation.

After perhaps a short break, there is evidence of a new occupation (Period V) commencing about the early sixth century and lasting for two or three

EARLY HISTORICAL CITIES

centuries. But by this time the occupation had become confined to the southern part of the site where the present town lies. Coins of Toramāṇa (*circa* A.D. 500) and Mihirakula (*circa* A.D. 510-40) have been recovered from these levels. The spacious brick buildings of this period were constructed neatly and suggest a good measure of prosperity. Again, possibly after a desertion, a new town (Period VI) sprang up here about the thirteenth century and continues to flourish to this day, although the sequence may be closed with a terminal date of A.D. 1700 to separate the archaeological material from recent accumulations. Pre-Mughal glazed ware, *lakhaurī* bricks and Muslim coins found on surface and in top fillings form the main evidence of this occupation.

3. AHICHCHHATRĀ

Ahichchhatrā, the capital of the north Pāñchāla according to the *Mahābhārata*, near the village of Ramnagar (Bareilly District), was excavated superficially by Cunningham, including a mound 3 km. west of it, which is supposed to conceal a *stūpa* built by Aśoka. The more extensive and important work, was, however, carried out here by the Archaeological Survey of India during 1940-44, under the direction of Rao Bahadur K.N. Dikshit and Shri A. Ghosh. The chief value of the work lies in the fact that for the first time a beginning was made here for the classification of pottery of historical times.

The thick accumulations of Ahichchhatrā revealed nine 'strata', ranging in date from prior to 300 B.C. to *circa* A.D. 1100. Although the presence of the Painted Grey Ware was noticed in the lowest levels at one of the excavated sites, the area excavated

AHICHCHHATRĀ

was so small that the priority of the Painted Grey to the N.B.P. Ware could not be asserted, though it appeared probable.

In Period I of the main excavated site, dated prior to 300 B.C., no structure was met with, but Period II, *circa* 300-200 B.C., revealed some mud-brick buildings and the presence of the N.B.P. Ware. Mud-brick houses continued in Period III, from *circa* 200 to 100 B.C. The first structures of kiln-burnt bricks were noticed in the succeeding levels, Period IV, of the first century B.C., when the city was also fortified by a 5.5-km. long peripheral brick defensive wall over two earlier earthen ramparts. Pāñchāla coins were numerous in this period and continued in Period V, to the end of the first century A.D. Kushan coins were found in Period VI, *circa* A.D. 100-350. In the next period, VII, *circa* A.D. 350-750, was encountered a temple complex, with large-sized Brāhmanical images of baked clay, the lower levels of the period also yielding coins of Achyu, identified with Achyuta, defeated by Samudragupta in *circa* A.D. 350. Periods VIII and IX, dated to *circa* A.D. 750-850 and 850-1100 respectively, showed poor buildings, and in the upper levels of the latter period were found coins of Ādivarāha and Vighraha. Ahichchhatrā was particularly rich in terracottas throughout its long existence. Among terracottas of the Śuṅga period the *mithuna* figures (pl. XV B) form a leading class.

Elsewhere in the fortified area were identified two large terraced temples, one illustrated (pl. XI B), having their origin in Gupta times and continuing in use till the end of the city in the twelfth century, by which time, according to inscriptional evidence from elsewhere, the capital of Pāñchāla moved to Vodāmayūtā (modern Budaun).

4. HASTINĀPURA

Hastināpura, the legendary capital of the heroes of the *Mahābhārata*, is identified with a village and its neighbouring mounds bearing the same name in Meerut District. Situated on a deserted bank of the Ganga, these mounds were excavated in 1950-52 by the Archaeological Survey of India, under the direction of Shri B.B. Lal. They fully corroborated the ceramic sequence of Ahichchhatrā, apart from revealing the true stratigraphic position of the Painted Grey Ware.

The occupation of Hastināpura is divided into five periods, the earlier two of which have been described above (p. 10). The Painted Grey Ware culture was brought to an end here by an extensive flood identified by the excavator with the one which, according to the tradition recorded in the Purāṇas, was responsible for the shifting of the capital from Hastināpura to Kauśāmbī. A town (Period III) sprang up here anew, the characteristic industry of which, from the early sixth to the early third century B.C., is the N.B.P. Ware, with which occur punch-marked and uninscribed cast copper coins, copper and iron implements, beads of semi-precious stones, bangles of copper, rings of copper and semi-precious stones and terracotta animal and human figurines. The houses are built of both mud and kiln-burnt brick. The soakage-pits were lined with burnt clay rings or fitted with series of jars vertically arranged. About 250 B.C. this entire township was destroyed by a large conflagration, which has left its scar over a wide area.

The site was re-occupied (Period IV) about 200 B.C., after a temporary break, as evidenced by the

HASTINĀPURA

presence of the coins of the Mathurakings, Yaudheyas and Kushans. Terracottas in Śunga and Kushan idioms, copper, ivory and iron objects, beads and rings, inscribed potsherds and a seal were recovered from the levels of this period. The brick-buildings of this period reveal a thickly-populated township, with seven structural phases being traced in a trench. The pottery in use was a red ware, often stamped with symbols. The upper levels also yielded specimens of a red ware painted in black, analogous to the Rangmahal Ware of Rajasthan. In the upper levels, dated to *circa* A.D. 300, were discovered imitation coins of the Kushan king Vāsudeva. The site was deserted again for an unknown reason, and re-occupied from about A.D. 1100 till the end of the fifteenth century (Period V). In the middle levels of this period was found a coin of Balban (A.D. 1266-87) and in the upper levels the pre-Mughal glazed ware.

5. KAUSĀMBĪ

Kausāmbī is mentioned in the later Vedic literature as the capital of the Vatsas. It is referred to also in other Sanskrit and Pāli texts and was visited by the Chinese pilgrims Fa-Hien and Hiuen Tsang. According to the Purāṇas, Hastināpura, the capital of the Pāṇḍavas, was swept away by floods at the time of Nichakshu, fifth in descent from Parikshit, the grandson of Arjuna. The capital was then shifted to Kausāmbī identified with modern Kosam, 52 km. south-west of Allahabad, on the northern bank of the Yamuna. Although the excavation has revealed no definite indication to confirm this tradition, there is ample evidence to support Buddha's association with Kausāmbī, referred to in the

EARLY HISTORICAL CITIES

Buddhist texts. A small-scale excavation was conducted here by the Archaeological Survey of India in 1937-38. And now, since 1948, the University of Allahabad has been excavating uninterruptedly under the direction of Professor G.R. Sharma.

Among the excavated historical cities in north India, Kauśāmbī is one of the earliest, if not the earliest. On ceramic evidence, the 16-m. thick deposit here, revealing twentyfive structural phases, has been divided by the excavator into four periods. Of these the first two periods have been discussed above (p. 14). The distinctive pottery of Period II, consisting of a decadent painted grey ware, quite different from the Painted Grey Ware of Rajasthan, Panjab and western Uttar Pradesh, and of red and black-and-red wares, the latter sometimes painted in white and superior to the black-and-red ware of Period I, belongs to a historical period, dated to 885-600 B.C. by the excavator, rather than to a protohistoric one. Iron occurs here almost from the beginning of the site. The introduction of the N.B.P. Ware marks the beginning of Period III. Not only the painted grey ware still continued, some of the N.B.P. Ware was also painted. Side by side occurred plain or painted pots in red or dull-red wares. The N.B.P. Ware completely disappeared in Period IV. The excavator has dated Periods III and IV to *circa* 605 to 45 B.C. and 45 B.C. to A.D. 580 respectively, on the same basis of calculations as the earlier periods.

Of an area of more than 20 sq. km. a large part here is enclosed within a roughly rectangular massive fortification-wall 6.5 km. in circuit, which was begun in Period I but was repeatedly repaired or added to in four succeeding main stages, all falling within the historical period. Originally the defences

consisted of a mud rampart-wall, with a burnt-brick revetment on the exterior laid in batter (pl. VI B). They were raised and a subsidiary rampart laid at the beginning of Period II, coeval with the fifth structural phase. The N.B.P. Ware appeared in the ninth structural phase, which was also the last phase in the first stage of the construction of the defences. In its second stage, the rampart was raised, and another secondary rampart was laid outside the first one. Guard-rooms, bastions, and a stone-paved corbelled drain were also added now. Subsequently, in the third stage, there was further extension of the rampart, and it was during this period that a human sacrifice is believed to have been performed immediately outside the fortifications. Additions and alterations continued in the fourth and fifth stages. The defences fell into disuse by the end of the twentyfourth structural phase, when the town was destroyed by Toramāṇa in about A.D. 515.

The altar believed to have been laid for the human sacrifice is situated outside the eastern gate at the foot of the defences. It is in the form of an eagle (*śyena-chiti*) flying towards the north-east. Here the discovery of a fire-place, animal and human bones, including a human skull, and certain details of construction are taken to answer to the descriptions of such altars in the *Śatapatha Brāhmaṇa* and other ritualistic texts. The sacrifice is believed to have been performed by the founder of the Mitra dynasty, whose coins have been recovered in abundance from corresponding levels.

In the south-western corner of the site, an extensive stone palace, covering an area of 315 by 150 m., has been uncovered recently. It shows three main phases (pl. XII A). In the earliest phase, the palace was built of rubble, perhaps plastered. In the second

phase a dressed stone facing was provided to the walls. Subsequently, the palace was destroyed, and when it was reconstructed, in the third and last phase, its walls were raised in brick but provided with a facing of dressed stone. There is use of lime both for plaster and as mortar. The palace consists of halls flanked by rooms, which are connected by openings spanned by the true arch. It was built, according to the excavator, before the use of the N.B.P. Ware, which appears to be on the decline during the third and last phase of the palace. The excavator believes that the palace may have been built by king Udayana, a contemporary of Buddha. If the early date assigned to the palace is confirmed by further evidence, our present ideas, which assume that ashlar masonry was introduced in India by the Greeks and true arch by the Muslims, would need important modifications.

One of the most important discoveries at Kauśāmbī—confirmed by inscriptional evidence—is that of the Ghoshitārāma monastery, built, according to the Buddhist tradition, by the merchant Ghoshita for Buddha. It was the scene of many a sermon by Buddha and is described in detail by Hiuen Tsang. The monastery consisted of a courtyard with rooms on the interior and a large *stūpa* in the courtyard. It shows several rebuilding phases and contains also a shrine of Hāritī.

Uninterrupted strata of occupation with a unique mass of datable objects in the later periods have turned up year after year at Kauśāmbī. That the site was subjected to destruction by the Hūṇas is clear by a seal counterstruck with the name of Toramāṇa and another bearing the appellation *Hūṇarāja* ('king of Hūṇas'). A seal of Kanishka was another interesting discovery. After the Hūṇas, a hitherto-unknown

RAJGHAT

dynasty of kings with their name ending in *datta*, such as Dhruvadatta and Śivadatta, appears to have ruled here. Among other objects found at Kauśāmbī are a rich range of sculptures, human and animal terracotta figurines, coins, moulds, beads and bangles, sealings, ivory objects and iron implements.

6. RAJGHAT

The ancient town of Vārāṇasī was one of the sixteen *mahā-janapadas*, or 'major states', and a great city from the earliest historical times. It was, however, an accidental discovery that in 1940 disclosed its original location, to the north of the present town of Varanasi (Banaras), for the removal of earth here for reconstructing the railway-station at Rajghat brought to light several ancient structures and other relics comprising clay sealings, terracotta figurines and pottery, including the N.B.P. Ware. The site lies between the Varuna and the Ganga, on the bank of the latter. The top deposit of 4 m. had already been removed by the contractors by the time the Archaeological Survey reached the scene for salvage-operations, which exposed, among other brick structures, a large temple-hall supported on twelve pillars.

The Banaras Hindu University have been now excavating at Rajghat off and on from 1957-58 under the direction of Dr. A.K. Narain. These excavations have revealed a continuous sequence of six periods, from before the N.B.P. Ware to late medieval times, which should serve as an index for this region.

Period I, dated from *circa* 800 to 200 B.C. and divisible into three phases, is characterized by the black-and-red, black-slipped and a fine hard grey ware recalling the Painted Grey Ware fabric. A

EARLY HISTORICAL CITIES

few microliths also are found. The N.B.P. Ware is introduced in the middle phase but shows signs of decadence in the upper phase. Iron appears to be absent in the lowest phase. Beads of terracotta, glass, semi-precious stones and copper are found throughout the period, while cast copper coins make their appearance in the uppermost phase. Mud-walls and ring-wells are the only evidence of dwellings. But a massive mud-rampart consisting of rammed compact clay of brownish colour, lying almost on the natural soil belongs to the middle, if not the earliest, phase of this period. Subsequently, the inhabitants appear to have excavated a channel connecting the Varuna with the Ganga, so that an effective barrier of water was formed all around the town.

In Period II, covering the two centuries preceding the Christian era, the N.B.P. Ware and the grey ware continued in diminishing use. The black ware went out of use, while a red ware became popular. Uninscribed cast copper coins and terracotta seals, some of them bearing names ending in *mita*, like Revatimita, in the characters of the second-first centuries B.C., help to date this period securely. The discovery of a hoard of more than one thousand bone points, including arrow-heads, was significant. There was considerable housing-activity in this period (pl. XII B). The kiln-burnt brick was in full use. The excavation exposed a house with two rooms, complete with bath and a wall, and hearths, a long drain and some ring-wells in other parts.

A red ware, often stamped with designs and symbols like *tri-ratna* and *dharmachakra*, as at Rupar, Ahichchhatrā and Hastināpura, occurred in Period III, dated from the beginning of the Christian era to the end of the third century. This

period is rich in terracotta seals and sealings, one of which bears the design of a humped bull inscribed with the word *pushkarana*, palaeographically datable to the second century A.D. Amongst the names on the seals, Harishena occurs on several of them. Copper coins, beads of clay, glass and semi-precious stones, votive tanks, figurines, skin-rubbers and bangles of glass were other objects of this period. Walls of several structures of this period were also exposed.

Inscribed seals, sealings and copper coins continued in Period IV, dated to *circa* A.D. 300-700. The pottery in this period was manufactured in both red and black colours. An easily-identifiable type is furnished by the long-necked 'sprinkler'. Particularly attractive are a terracotta head of Buddha and other figurines. Brick-built structures in this period are many, and they include square *kundās* or tanks with widening sides and a brick-edged platform associated with an apsidal structure. Earthen jars containing human bones, grains and cowries formed evidence of some post-cremation burials. A kitchen, complete with oven and storage-jars, was another interesting discovery.

Period V is dated from the ninth to the twelfth centuries. Evidence of dwellings in this period was flimsy, but architectural activity in another direction appears to have increased, as suggested by the discovery of *āmalakas* and other architectural pieces from temples.

Architectural pieces of stones continued in the sixth and last period, from the beginning of the twelfth to the end of the seventeenth century. It is characterized by the use of small *lakhaurī* bricks and glazed pottery. The deposits of this period also yielded coins of the Sūr ruler Islām Shāh (1545-54) and of Akbar (1556-1605).

EARLY HISTORICAL CITIES

7. RAJGIR

Rajgir, about 100 km. south-east of Patna, was known anciently by several names, Rājagṛiha being one of the latest and more popular. Among the excavated city-sites of historical period, it is one of the earliest. According to the *Mahābhārata*, Jarā-sandha, an adversary of the Pāṇḍavas, ruled here. In more historical days it was the capital of Magadha, and Buddha visited it frequently during the reigns of Bimbisāra (*circa* 543-491 B.C.) and his son Ajātaśatru (*circa* 491-459 B.C.). The First Buddhist Council was also held here soon after his death. Mahāvīra, the last Jaina Tīrthaṅkara, is said to have passed several rainy seasons here, and the Jāinas hold it holy also as the birth-place of their twentieth Tīrthaṅkara, Muni Suvrata. Jaina temples continue here till this day.

The earlier excavations at Rajgir from 1905-06 by the Archaeological Survey of India consisted mainly of clearance and identification of its various features, such as neighbouring woods, hills and caves, with those mentioned in Indian literature and the accounts of the Chinese pilgrims Fa-Hien and Hiuen Tsang. Situated as it is in a long valley, the natural defences provided by the engirdling hills here were first strengthened by raising a high rampart of rubble running over the hills, about 40 km. in circuit (pl. XIII A). A smaller citadel inside it, pentagonal in shape, was later encircled by an earthen wall of rubble-core. Outside the valley, another fortified town, known as New Rājagṛiha, is believed to have been built by Ajātaśatru.

In the valley, within the inner fortification, excavations have brought to light several structures. One of these, square on plan, is identified with

the prison, from where, Bimbisāra, although confined within it by his son, Ajātaśatru, could behold Buddha on the Gṛidhrakūṭa hill, which was his favourite resort. A stone-paved pathway, ascending the Gṛidhrakūṭa, regarded as part of an ancient fortification by John Marshall, is believed to have been built by Bimbisāra. The site of Jīvākāmravana, where Jivaka, the court-physician of Bimbisāra, is believed to have erected a monastery for Buddha, was excavated recently and revealed several elliptical halls, perhaps parts of monasteries. A wall of blocks of stone to the south of the road to the Gṛidhrakūṭa, hitherto taken as part of an inner periphery for the city, turned out to be the embankment of a large reservoir, identified with the ancient Sumagadhā.

Maniyār-Maṭh, a hollow cylindrical brick structure in the centre of the valley, surrounded by a stone compound-wall, was found to have been built over earlier stone buildings. It was enlarged several times, including in the late Gupta period, when niches were provided on its outer face for accommodating Brāhmaṇical images modelled in stucco. Among the sculptures found around it is a sculpture with *nāga* figures inscribed with the name Maṇināga, a serpent-deity whose shrine at Rajgir is mentioned in the *Mahābhārata*.

On the Vaibhāra hill a stone structure known as the *machān* ('watch-tower') or Jarāsandha-kī-Baiṭhak, is identified with the residence of Pippala of the Buddhist texts, and a group of caves with the Saptaparnī, where the First Buddhist Council was held after the death of Buddha. Outside the hills on the north lies the Veṇuvana, where a large dried-up low land is taken to be the Karaṇḍa tank of literature. The excavations in this area revealed the remains of several *stūpas* and sculptures.

EARLY HISTORICAL CITIES

In recent years isolated areas of the site have been excavated on scientific lines. A scraping carried out by Shri A. Ghosh in a section cut by a rivulet yielded interesting data. The occupation suggested a sequence of four periods, but whether this would hold good for the entire site is yet to be seen. The lowest signs of habitation showed fragmentary dull-red sherds and above them was a clear deposit of the N.B.P. Ware, assigned to *circa* 500-200 B.C. The third and fourth periods, in which the N.B.P. Ware was absent, were dated respectively to the first century B.C. and the first century A.D. A hitherto-unknown type of post-cremation burial came to light in the lower levels yielding the N.B.P. Ware: a pit with an elliptical bottom and an additional cylindrical base was first dug and lined with clay; then the bones left after cremation were interred in it, and the hollowed-out 'urn' sealed with clay again.

Recently the ramparts of the New Rājagriha, supposed to have been built by Ajātaśatru, have been excavated and have suggested three successive periods of occupation. Over a scanty deposit of the N.B.P. Ware, found in association with a red ware (Period I), lies a mud-rampart (Period II A), over which a brick-wall was added later (Period II B). After the collapse of the brick-wall, the rampart was heightened by a thick deposit of earth and ash (Period III A) and strengthened again on top by walls of brick-bats (Period III B). The excavation, under Shri Raghbir Singh, is still in progress and further work may modify the above picture, obtained from a single trench.

PATNA

8. PATNA

Among the ancient cities of the central Ganga basin, Pāṭaliputra, modern Patna, occupies an important place. Ajātaśatru's successor, Udayin (*circa* 459-443 B.C.), transferred the capital of Magadha to this place from Rājagṛiha, and the Third Buddhist Council during Aśoka's rule was held here. It continued to be the capital under the Mauryas, and Megasthenes, the Greek envoy at Chandragupta's court (*circa* 322-298 B.C.), describes it as a flourishing city on the confluence of the Ganga and Son, 14·5 km. in length and 2 km. in width, enclosed by a wooden palisade, which was pierced with loopholes for discharging arrows. Below the rampart ran a defensive ditch which also carried the sewage of the city.

The high water-table and the location of the present city largely on the ancient settlement have not permitted lateral excavations here on a large enough scale. But several isolated sites have been dug up from time to time, apart from the accidental discoveries of pottery, terracottas, carved ring-stones and beads, all ranging on stylistic grounds from the Maurya to Gupta periods. Kumrahar and Bulandibagh were excavated as early as 1912 to 1915 by the Archaeological Survey of India, while the K.P. Jayaswal Research Institute, Patna, excavated at Kumrahar and certain other sites in recent years under the direction of the late Dr. A.S. Altekar and Shri V.K. Mishra on behalf of the K.P. Jayaswal Research Institute.

A sequence of five periods, the earlier four running without break from *circa* 600 B.C. to A.D. 600 and the fifth beginning from A.D. 1600, was revealed by the excavations in four isolated areas in 1955-56.

EARLY HISTORICAL CITIES

The distinctive pottery of Period I (*circa* 600-150 B.C.) was the N.B.P. Ware, associated with red and grey wares, large storage-jars being made in a coarse red ware. Iron implements, terracotta animal figurines and bone points were some of the other objects in use in this period. Certain fragmentary architectural pieces of sandstone bore a high polish, usually associated with the Mauryan workmanship. In the upper levels could also be noticed some structures of kiln-burnt bricks.

In Period II (*circa* 150 B.C.-A.D. 100) the same ceramic industries continued, with degeneration in their fabric, and diminution in the quantity of the N.B.P. Ware. Punch-marked and cast coins, including the Kauśāmbī 'lanky bull' type, and stone and terracotta seals bearing symbols were some of the new articles in use, indicating trade and prosperity. Bricks and tiles were used now for houses, and ringed soak-wells for disposal of refuse and sullage.

The N.B.P. Ware went out of use in Period III (*circa* A.D. 100-300), and the pottery was now generally red or grey. Coins, terracotta figurines, sealings, etc., continued in use. A gold amulet fashioned after the coins of Huvishka, with legend on one side and the figure of the Greek goddess Ardochsho on the other, is particularly interesting. Period IV (*circa* A.D. 300-600) yielded plain red ware and terracotta figurines, including figures of Naigameśa. There were also other objects of Gupta craftsmanship. After a long break the site was occupied again in about 1600 (Period V). Glazed pottery, glass beads, ivory dice and a coin of Shāh 'Ālam were recovered from the levels of this period.

During the excavations of 1912-15, below some brick structures assigned to the Gupta period, eighty heaps of polished stones, in eight rows of ten heaps

PATNA

each, with an interval of 4·5 m. from heap to heap, were discovered at Kumrahar amidst a deposit of charcoal and ash. This was taken by the excavator, D.B. Spooner, as the remains of a pillared hall of Mauryan date, the wooden superstructure of which was assumed to have caved in as a result of a conflagration, leaving an ashy deposit. To the south of this hall were discovered seven wooden platforms, each 9m. long, 1·5m. wide and 1·2 m. high, but their purpose remained unascertained. Spooner ascribed a Persepolitan origin to the hall and put forth the astounding view that the pillars of the hall had sunk—in fact, were probably still sinking—deep into the soft slimy earth underneath. The recent excavation here by the K.P. Jayaswal Research Institute revealed a pre-structural phase, the structures starting from *circa* 150 B.C., and established that the missing pillars, or the surviving stumps thereof, were removed during the middle of the second century B.C. after the conflagration. The hall had eightyfour pillars, eighty in the main hall and four at the entrance, and they rested on wooden bases, which distributed their load. A canal coming from the east in the same alignment as the wooden platforms discovered by Spooner was also noticed. An enormous brickwork and structures from the Mauryan to late Gupta times also came to light in this excavation and included a monastic establishment, known as Ārogya-vihāra, according to a clay sealing, and an apsidal structure with a circular *stūpa*, which was rebuilt on a square plan at a later date. Also there were coins, beads and terracotta figurines, those from Gupta levels being particularly charming (pl. XVI A).

At Bulandibagh, again below some brick buildings of Gupta date, was found in 1926-27 a unique

EARLY HISTORICAL CITIES

wooden construction, consisting of a series of 4·25 m. long wooden planks at bottom, flanked by 4·5 m. high wooden uprights, which were spanned on top by tenoned planks, the entire arrangement making a hollow passage. This structure was uncovered to a length of 75 m. without reaching its end. It was identified with the wooden palisade mentioned by Megasthenes. A similar wooden structure, without, however, the bottom planks, also came to light accidentally at Gosain-khanda, half a mile east of Bulandibagh.

9. VAIŚĀLĪ

Vaiśālī, mentioned in the *Rāmāyaṇa* and in the Buddhist literature, is reputed as the birth-place of Mahāvira and the capital of oligarchical Lichchavis from early times. It was the scene of the Second Buddhist Council held about a hundred years after Buddha's death. A pillar erected by Aśoka also exists in its neighbourhood. Vaiśālī is identified with what was till recently known as Basarh (District Muzaffarpur of Bihar) and was excavated earlier, in 1903-04 and 1913-14, by T. Bloch and D.B. Spooner of the Archaeological Survey of India, when the discovery of seals engraved with the name of the city as Vaiśālī confirmed the earlier identification. In 1950 it was excavated on a larger scale by Shri Krishna Deva of the Archaeological Survey of India, under a scheme of the Vaiśālī Sangh. Further excavations between 1957 and 1961 were carried out by the K.P. Jayaswal Research Institute first under the late Dr. A.S. Altekar and later under Shri Sita Ram Roy.

According to literary tradition, Vaiśālī had three city-walls. Two of these have been identified:

VAISĀLI

while the main mounds are enclosed within a large rectangular mud-built enclosure, known as Rājā-Viśāl-kā-Gaṛh, another rampart outside it has been traced over a long stretch. There are remains of several *stūpas* inside and outside the fortifications.

The occupation at Vaiśālī is divided into four periods from *circa* 500 B.C. to A.D. 500. Period I is divided into two sub-periods, A and B. Period I A is characterized by black-and-red and red wares in association with the N.B.P. Ware, iron objects and bone arrow-heads. No trace of a dwelling was found in this sub-period, but in Period I B, dated from 300 to 150 B.C., kiln-burnt bricks were in use. A grey ware now made its appearance, although the N.B.P. Ware continued. Beads of semi-precious stones and terracotta figurines of *nāgas* occurred in these levels for the first time.

In Period II, 150 B.C. to A.D. 100, there was considerable structural activity. Some sherds of the N.B.P. Ware were also recovered. Punch-marked and cast copper coins and a steatite votive plaque with representation of a mother-goddess were other objects found in these levels.

Period III, dated from *circa* A.D. 200 to 300, was characterized by a red ware. Several remains of well-built brick structures were exposed in this period. Period IV, from A.D. 300 to 500, yielded fine Gupta terracottas and sealings inscribed in Gupta script.

According to Buddhist texts the Lichchhavis built a *stūpa* over their share of the relics of Buddha to the north-west of the city; this is identified with the remains of a *stūpa* of mud excavated recently. Originally it was 7.5 m. in diameter and was subsequently enlarged by burnt brick several times, ultimately resulting in a diameter of over 12 m. (p. 89).

EARLY HISTORICAL CITIES

The defences showed three periods. The original rampart overlying the N.B.P. Ware, was built with burnt brick in the Śunga period (Period II), although only brick-bat débris was encountered in the excavation. During the rule of Kushans (Period III) it was heightened with earth and encircled by a moat, while in the Gupta period (Period IV) brick was used again, and barracks and other structures added to it.

Excavations at other sites have confirmed the above sequence and have revealed several mud-built *stūpas*. The site is fairly rich in coins, seals and sealings, terracotta figurines, ornaments and other objects usually found on early historical sites.

10. UJJAIN

Ujjain (ancient Ujjayinī) is one of the sites known to the earliest literary tradition as one of the sixteen *mahā-janapadas* or 'major states' into which northern India was divided. It was the capital of Avanti, and king Pradyota, a contemporary of Buddha, ruled here. It lies on the bank of river Śipra, a tributary of the Chambal. Both the town and the river find mention in Kālidāsa's *Meghadūta* and other works of Sanskrit literature.

The site was superficially excavated earlier by the Archaeological Department of Gwalior State; recently it has been excavated on a larger scale by the Archaeological Survey of India under the direction of Shri N.R. Banerjee. The occupation of the site is divided into four periods. Period I, dated to *circa* 750 to 500 B.C., is characterized by black-and-red, fine red-slipped, and coarse granulated wares, the last one dominating over the other two classes

UJJAIN

by sheer quantity. Iron is found from the very beginning. The houses were built with mud. A massive rampart with an extant basal width of 75 m. and height of 13 m. in the shape of a parallelogram, with a moat 24 m. wide around it, except on the riverside, was thrown around the habitation in the latter half of this period. The discovery of a single sherd of the Painted Grey Ware from the core of the rampart indicates that the ware had found its way to Ujjain earlier than the construction of the rampart. There was evidence of breaches in the rampart, which were repeatedly repaired. Over the riverside the rampart was strengthened with a caging of wooden rafters covered by mud (pl. XIII B). The major ingress to the town was through the gateway on the north-west, where a succession of roads was discovered.

In Period II, dated to *circa* 500 to 200 B.C., to the earlier categories of pottery, the N.B.P. Ware was also added. Judging from its quantities it appears to have been manufactured locally. Arrow-heads of bone, one of them bearing even a red stain, which has been identified as the blood-trace of a bird, occur in large numbers in this period. Inscribed seals, coins, iron objects like arrow-heads and spear-heads, terracottas and ornaments, particularly ear-disks of copper, ivory, jasper and clay, are some of the other objects used in this period. There is evidence of considerable structural activity consisting of the use of both mud-brick and kiln-burnt brick. A large tank, 10 m. by 8 m., and a canal exposed to a length of 56 m., both brick-built, are noteworthy. A tile-roofed mud-built workshop for the manufacture of beads of stone, arrow-heads and perhaps knitting-needles of bone was also discovered.

EARLY HISTORICAL CITIES

Period III is assigned to *circa* 200 B.C. to A.D. 1300, from the time of Śuṅgas to that of Paramāras, its sub-periods not having been worked out yet. Coins with Ujjayinī symbol and terracotta figurines abound in this period. Particularly remarkable for its decorative tunic and other ornamentation is the figure of a lady of the Kushan period (pl. XV C and D). The manufacture of beads of semi-precious stones is a specialized industry of this period. It may be noticed that the *Periplus of the Erythraean Sea* refers to Ujjain as an emporium of trade exporting precious and semi-precious stones to the western world through the port of Broach. The exposed houses of this period were built of mud on rubble-foundations. There existed also ringed soak-wells, vertically arranged soakage-jars and drain-pipes. A channel-shaped oven with several cooking-positions suggests its communal use. Period IV signifies only a short-lived settlement in the fourteenth century. Coins, glazed and other typical pottery and brick and stone structures were noticed in the levels of this period.

11. ERAN

Eran (ancient Airakiṇa) is well-known for its Gupta remains consisting of temples and inscribed pillars. It is surrounded on three sides by the meandering Bina (ancient Venṇā), which is ultimately connected with the Yamuna over the Betwa. The site has been under excavation since 1960-61 by the University of Saugor under the direction of Professor K.D. Bajpai.

The deposits of long occupation here are assigned to four periods. Period I is protohistoric and has already been mentioned (p. 22). Eran was occupied

ERAN

again, after a long gap, a few centuries prior to the beginning of the Christian era (Period II). Iron had now come into use and the coarse red ware was the normal pottery, although the plain black-and-red ware still continued. A sherd of the N.B.P. Ware was also found in the upper levels of this period. Apart from beads of terracotta, shell and semi-precious stones, bangles of shell, stone weights, terracotta figurines and punch-marked and cast tribal coins also occur in this period. A lead piece bearing an impression of a die with the legend in Mauryan Brāhmī reading as *raño Idagutasa*, 'of king Indragupta', is particularly interesting. Although no structures were met with, brick-bats attested to their prior presence.

Occupation continued during the first four or five centuries of the Christian era (Period III). The black-and-red ware now entirely disappeared and the well-known Red Polished Ware, associated with Roman ceramics, now came into use. The houses were built substantially with kiln-burnt bricks. This period was particularly rich in coins, yielding a large hoard of punch-marked coins and coins of Rāmagupta, the Nāgas and the Indo-Sassanians. Among these the coins of Rāmagupta, both lion and Garuḍa types, are recorded for the first time. Figurines in Gupta style also occurred in these levels. Particularly interesting was a seal bearing the figure of Gaja-Lakshmī, with an inscription in Gupta characters which mentions the name of the town as Airakiṇa.

Period IV is medieval, datable from 1600 to 1800. The town was now fortified by a long stone-wall. Glass and shell bangles appear to have been a popular industry in this period.

12. MAHESWAR AND NAVDATOLI

Maheswar and Navdatoli (District West Nimar, Madhya Pradesh) lie on the southern and northern banks of the Narmada respectively, facing each other. Maheswar is traditionally identified with Māhishmati—a city founded by king Muchukunda according to the Purāṇas and other works and once the capital of Avanti according to Buddhist texts, to be distinguished no doubt from the northern capitals at Vidiśā or Ujjayinī in different periods. Both Maheswar and Navdatoli were excavated in 1952-53 under the direction of Dr. H.D. Sankalia by a joint expedition organized by the Deccan College Post-graduate and Research Institute, Poona, with assistance from the Universities of Poona and Bombay and the Department of Archaeology of the erstwhile Madhya Bharat State. Excavations were continued even subsequently at these sites under the same director.

Taken together, these two sites have yielded the story of human habitation on the Narmada, with certain gaps, from prehistoric to late medieval times. Of the seven periods, into which the occupation of Maheswar and Navdatoli is divided, the first two belong to the Early and Middle Stone Ages, and the third to the protohistoric period, which has been dealt with earlier (p. 20). The remains of Periods III and IV are found both at Navdatoli and Maheswar, but the subsequent story from Period V to VII is gleaned only from Maheswar.

The protohistoric occupation at Maheswar and Navdatoli ended in about the fourteenth century B.C., and it was after a long gap that the sites were re-occupied again in Period IV, which is characterized mainly by the black-and-red ware and the

MAHESWAR AND NAVDATOLI

N.B.P. Ware and early coins. It may be dated from *circa* 400 to 100 B.C. By now iron had come into use. Terracotta figures, toys, bangles and beads, the last also of semi-precious stones and glass, formed other material in use. A *stūpa* at Navdatoli, with some of its bricks inscribed in letters of the third century B.C., falls in this period; it was destroyed by a flood. The use of kiln-burnt brick in the *stūpa* suggests good housing, but the remains of houses found in the excavations are limited to post-holes, pebble-walls and ring-wells.

In Period V, limited to Maheswar, dated between 100 B.C. to A.D. 100, the black-and-red ware diminishes considerably, while tan and burnished red wares become more popular. A number of glass objects come from this period. The evidence of houses is provided by brick-bats and tiles.

Period VI is characterized by the Red Polished Ware, which is found largely in western India in association with the remains of the Kshatrapa period. It is closely akin to the Roman Samian ware, and one of its forms, a long and narrow-necked spouted vase, commonly described as 'sprinkler', is perhaps of Mediterranean origin. The black-and-red ware shows a further decrease in this period, while coarse red and black wares are on the increase. The exposed structures of this period were largely fragmentary but included a house consisting of a large room with verandahs and two small rooms, all built with kiln-burnt bricks raised on pebble and mortar foundations.

Period VII is dated to late medieval times when this part of the country was under the control of Muslims and Marathas successively.

EARLY HISTORICAL CITIES

L. NASIK

Nasik, on the southern bank of Godavari, is the headquarters of a District of the same name and is mentioned in several Sanskrit works, perhaps the earliest direct reference occurring in the *Mahābhāshya* of Patañjali of the mid-second century B.C. It is famous for the rock-cut caves in its neighbourhood, some of them inscribed, and excavated between 100 B.C. and A.D. 300. In 1948 some sherds of the N.B.P. Ware were picked up here. It was subsequently systematically excavated by Dr. H.D. Sankalia as part of the excavation-programme of the Deccan College Post-graduate and Research Institute, Poona.

Tools of Early Stone Age have been picked up here from the surface. Of the total height of 30 m. of the mound, only a thickness of about 7.5 m. contains, however, the relics and remains of human habitation, divided into four periods from the proto-historic to medieval times. The first period, proto-historic, dealt with earlier (p. 24), ended in about the thirteenth century B.C. The site remained deserted till about 400 B.C., when it was re-occupied in early historical times (Period II).

This period is divided into two phases, A and B, dated to 400-200 B.C. and 200 B.C.-A.D. 50 respectively. The common pottery of this period is a coarse red ware with globular vessels, dishes, bowls, large jars and others shaped like gourds. Quantitatively a black-and-red ware comes next, the popular shapes in it being jars, bowls, dishes and basins. The houses in this period were mud-walled, and there also existed soakage-pits lined with bricks or rings. Two huts were exposed in some detail. Associated with the dwellings were large storage-jars. Iron

NASIK

implements, beads of terracotta and semi-precious stones and bangles of shell were other articles in use. Glass was known, but only traces have been found. In Period II B uninscribed cast copper coins and some sherds bearing criss-cross designs as in the Āndhra Ware also appeared.

The introduction of the well-known Red Polished Ware, more characteristic of western India, marked the beginning of Period III. Some of the sherds are inscribed with symbols or Brāhmī characters, palaeographically datable between the third and first centuries B.C. The houses were now built with kiln-burnt bricks and roofed with terracotta tiles. This period is dated from A.D. 50 to 200, and it is during this period that the Kshaharātas ruled over this part of the country. Bone, glass and gold were now used for beads.

Period IV covers the span from 1400 to 1875, when Nasik came successively under the sway of Muslim provincial governors, Mughals and Marathas. The common pottery of this period is red or black, and some of the shapes are, curiously enough, similar to those from Period II. Celadon ware and shell bangles, some decorated, are found in the levels of this period.

14. NEVASA

Nevasa, on the Pravara, a tributary of the Godavari, lies in District Ahmadnagar and is famous as the home of the thirteenth century saint Jñāneśvara, famous for his commentary on the *Bhagavad-Gītā*. Excavation was started here in 1954 and carried on in subsequent years by Dr. H.D. Sankalia of the Deccan College Post-graduate and Research Institute, Poona.

EARLY HISTORICAL CITIES

Nevasa provides a fuller index of the cultural sequence on the Godavari than Nasik, in the sense that relics of the Old and Middle Stone Ages are better represented here. Including the two Stone Ages, the occupation here is divided into six periods, the later four of which are roughly coeval with the four periods of Nasik. Nevasa, however, has been excavated on a larger scale and has produced more ample evidence for each period.

Period III, protohistoric, came to an end in about the thirteenth century B.C., as mentioned earlier (p.25). Nevasa was occupied again after a long gap in about 200 B.C. in the historical period (Period IV). A black-and-red ware, and the so-called Āndhra Ware, with criss-cross designs, were now in use. Vessels of the N.B.P. Ware were also finding their way now to this place. Iron was the main metal and the currency included the coins issued by the Sātavāhana rulers. A punch-marked coin has also been recovered from the levels of this period. Beads, crucibles and animal figurines were in use.

Pebbles and clay, or alternating courses of black clay and silt, were now used in the foundations of houses, which were largely built with kiln-burnt bricks. The floors were of lime and clay, mixed with hemp. Wooden posts, however, still supported some of the roofs, as in protohistoric times. Soak-pits lined with bricks or rings and storage-jars embedded in floors formed other adjuncts of houses.

The introduction of the Red Polished Ware and Roman amphorae in about 50 B.C. heralded the beginning of the next period (Period V). Life became more affluent, but there was no vital change in the pattern of life or the articles of everyday use. Glass may have been known in protohistoric times, but it became now more accessible. Faïence and

shell, apart from semi-precious stones and terracotta are among other materials used for manufacture of beads. Votive tanks, human figurines and a wide range in iron implements supplied other needs. The houses were built on the same pattern as in the preceding period, but tiles were used for roofing.

The site was deserted in about A.D. 300, and it was after a long gap, in about 1400, that it was inhabited once again during the rule of the provincial governors appointed by the Sultāns of Delhi (Period VI). The Mughals and Marathas ruled over it successively till about 1700. The houses were now often made of stone. The celadon, glazed ware and glass, the last of which was perhaps the most popular material for bangles, are characteristic of this period. These levels also yielded coins of the Bahmanī and Nizām Shāhī rulers.

15. TAMLUK

The sea-port on eastern coast mentioned in literature under different names, such as Tāmraliptā, Dāmaliptā, Tāmralipti or Tāmraliptikā, from where Indian seacraft sailed to the islands in the Indian archipelago and China, is identified with Tamluk (District Midnapur) on the Rupnarayan river. Besides being mentioned by Ptolemy, it was visited by the Chinese pilgrims Fa-Hien, Hiuen Tsang and I-tsing. Silver and copper punch-marked and rectangular cast coins, terracotta figurines and ancient pottery were picked up here from time to time. A few trial-trenches were sunk here in 1940. Excavation was undertaken, however, on a larger scale in 1954-55 by the Archaeological Survey of India under the direction of Shri M. N. Deshpande.

EARLY HISTORICAL CITIES

The excavation revealed that the site had been occupied from the neolithic to modern times, perhaps with several breaks. The ponds and other cuttings made later, disturbing the ancient accumulations, did not allow to obtain a connected sequence.

Over the neolithic celts associated with an ill-fired pottery, the site was occupied in the third-second centuries B.C. (Period II). Typical terracotta figurines in Śunga style, cast copper coins and pottery normally associated in northern India with the N.B.P. Ware were found in these levels. Even the latter had been picked up earlier. Rouletted Ware, and 'sprinkler'-type vessels, bespeaking contact with the Roman world, characterized the next period (Period III), which could be dated to the first two centuries of the Christian era. A brick-built deep stepped tank and ringed soak-wells provided evidence of structural activity in this period.

Occupation during the Kushan and Gupta times (Period IV) was indicated by typical terracotta figurines, one of which, although broken, provided a competent Gupta specimen with its graceful modelling and transparent drapery. Pieces of sculptures indicated occupation in Pāla and Sena times, while remains of houses and salt-factories of the eighteenth and nineteenth centuries were found in top levels.

16. BANGARH

Bangarh (Dinajpur District), anciently known among others by the names of Koṭivarsha and Devikoṭa, lies on the bank of the Punarbhava, a feeder of the Padma, a major distributary of the Ganga. It was excavated by the University of Calcutta

BANGARH

during 1937-41 and again in 1951 under the direction of Shri K.G. Goswami.

Five 'strata', dating from the Maurya to the early medieval period, were recognized here by the excavator. In the lowest stratum was exposed a ring-lined soak-well; the potsherds from this level included specimens of the N.B.P. Ware. Period II, coeval with the period of the Śūṅgas, was characterized by prosperous buildings, drains, cess-pits, and a brick-built rampart-wall. Terracotta figurines, typically Śūṅga in technique and features, were among the objects from this level. The pottery from Period III, covering the Kushan and Gupta times, shows various impressed decorative motifs. During this period and the following one, when the Pālas had come on the scene, the rampart-wall was raised higher. A small but unique lotus-shaped tank, originally covered with a pillared canopy, belongs to the Pāla period. With the tank at the centre, the primary plan of the buildings to which it pertains is cruciform, a chamber on each corner communicating with the tank. Carved bricks and stone sculptures form other relics of this period. No buildings in Period V were encountered, but the abundance of glazed potsherds leaves no doubt as to the early medieval age of the top levels.

17. CHANDRAKETUGARH

Ancient terracottas and pottery had been picked up earlier from the fortified site of Chandraketugarh (District 24-Parganas), 37 km. north-east of Calcutta. The site has been under excavation by the University of Calcutta from 1956-57 under the direction of Shri K.G. Goswami and others. The excavation has revealed almost a continuous sequence

EARLY HISTORICAL CITIES

of occupations, divided into six periods, from the pre-Mauryan to Pāla times, at the two mounds of Chandraketugarh and Khana-Mihirer-Dhipi and a third site known as Itākhola, all parts of the village known as Berachampa.

In pre-Mauryan levels (Period I) a red ware, often treated with a slip, was in use, along with ivory beads, bangles and other small objects. Period II was probably coeval with the Maurya and Śunga rule. It is marked by the introduction of the N.B.P. Ware and black-slipped, polished and unpolished grey wares. Pieces of a Rouletted Ware dish, beads of semi-precious stones, antimony-rods of copper and ivory, terracotta figurines and copper punch-marked coins were recovered from this period. In Period III, possibly late Śunga, a red ware, sometimes bearing stamped designs, appears to have been in use. In addition to typical Śunga terracottas, beads of stones, antimony-rods of bone, ivory and copper, steatite caskets, cast copper coins and sherds inscribed in early Brāhmī are the other antiquities of this period. Period IV, coeval with the Kushan rule, yielded typical terracotta human figurines, cast copper coins, beads of glass and semi-precious stones, bangles of shell and terracotta plaques, one of which, portraying a pair of parrots pecking at a lotus-pod, was particularly interesting.

In the first four periods there are either no traces of houses, or, if at all, they appear to have been built with mud, bamboo and timber with roofs of tiles. Wooden piles for bearing the load of overhead structures appear to have been driven in the soft earth of this deltaic region. The kiln-burnt brick was introduced in Period V in the Gupta times, when the pottery in use was grey or black, sometimes bearing stamped designs. Terracotta

CHANDRAKETUGARH

plaques with animal and human figures, the latter often portraying *mithunas*, and ear-studs were among other objects in use.

At the mound of Khana-Mihirer-Dhipi, where eight occupational levels were noticed, a large polygonal brick structure of *sarvatobhadra* plan, probably the remains of a temple, belongs to the Gupta period. This temple was enlarged out of an earlier smaller structure. In the the centre of the temple a brick-lined square pit with widening sides was found covered by later additions. Before the construction of the temple, the dwellings consisted of wooden or bamboo structures bearing tiled roofs. The site was also under occupation during the rule of the Pāla kings (Period VI), to which some of the later structures belong.

The excavation has also revealed the remains of two votive *stūpas* and an extensive brick-built wall, which suggest the existence of a Buddhist establishment in later Gupta times.

18. SISUPALGARH

In ancient Kalinga, Sisupalgarh, near Bhubaneswar, possibly identical with Tosali mentioned in Aśoka's edicts at Dhauri, 3 km. south of it, and with Kalinganagra of Khāravela's Hāthigumpha inscription at Khandagiri, 10 km. north of it, was excavated by the Archaeological Survey of India under the direction of Shri B.B. Lal.

The total occupation of Sisupalgarh can be divided into three periods. The formative period of the settlement, *circa* 300-200 B.C., shows singularly plain pottery of a dull grey to terracotta red surface. No structural remains of this period came to light. The next period, with impressive

EARLY HISTORICAL CITIES

structures of laterite slabs, may be divided into two phases, the earlier of which, *circa* 200 B.C. to A.D. 100, shows a sophistication of the local pottery combined with the introduction of decorations and the evolution of a bright-red polished ware. At the bottom of this period occurs the black-and-red ware, while the late levels occasionally yield fragments of the Rouletted Ware. In the upper phase of this period, *circa* A.D. 100-200, the bright-red ware deteriorated into a plain red ware with an ordinary wash, and the decorative patterns became crude. Glass bangles, clay *bullae* imitating Roman coins (pl. XVI C), a silver punch-marked coin and a copper coin of Huvishka were also found in the deposits of this period. In the last period, *circa* A.D. 200-350, the devolution of the bright-red ware into a thin ineffective red or yellowish-red pottery was complete. A gold coin, copied from the coinage of the Kushan king Vāsudeva, and some Puri-Kushan coins came from this period. A large number of terracotta ear-ornaments obtained here show their beginnings in the second period, but it is in the last period that they became extremely abundant and characteristic of the site.

The houses in the town were built with bricks or cut laterite-slabs, and the streets seem to have been laid on a chess-board pattern. The remarkably elaborate western gateway, built of massive slabs of laterite, was flanked by L-shaped arms projecting outwards which could be ascended by regular flights of steps (pl. XIV A). Two doorways, outer and inner, gave access to the town through the flanks. A third narrow passage, passing through the northern flank close to the inner doorway, presumably restricted the entry when the main doorways were closed as occasion demanded.

SISUPALGARH

The site was first occupied about 300 B.C., but the original rampart, of heaped earth, was not built till a hundred years later, when the black-and-red ware made its first appearance here. In the second phase, a 10-15 cm. thick layer of laterite was laid on the earlier earthwork. Two brick-walls, 8 m. apart with débris and mud-filling in between, marked the third phase; and, finally, when the earlier revetment had partially collapsed, a new revetment was built with stepped exterior.

19. ARIKAMEDU

Finds of certain beads and gems of Roman make at Arikamedu, 3 km. south of Pondicherry, had attracted the attention of the French antiquarian G. Jouveau-Dubreuil in 1937. Subsequently the French authorities carried out a superficial excavation there. In 1945, however, the site was systematically excavated by the Archaeological Survey of India under the direction of Dr. (now Sir) Mortimer Wheeler, on a scale large enough to give a reasonably clear picture of the nature of the ancient settlement, including its contact with the Roman world.

A large warehouse, built in about A.D. 50, came to light in one of the two sectors excavated; in the other were noticed four levels of successive structures, which included a courtyard with two small tanks (pl. XIV B), both believed to have been used in the preparation of muslin exported outside India.

The broken bits of pottery revealed, however, Roman wares of two categories which occurred almost through the entire span of occupation, from the close of the first century B.C. to A.D. 200. These were the two-handled amphorae, intended to contain

EARLY HISTORICAL CITIES

wine or oil, and the smooth-surfaced wide dish with concentric bands of rouletted pattern, which has come to be known as the Rouletted Ware. The pattern and technique of the latter were definitely importations, though not necessarily so the specimens found. A third ware was more limited in duration, between A.D. 20 to 50. This is a red glazed ware, sometimes stamped with the name of the potter (pl. XVI D) and commonly called the 'Arretine' Ware, from the Latin name of Arezzo (Arretium), which was famed contemporaneously for producing a high-quality ware of this class. Among other imported objects, including earlier finds, were Graeco-Roman gems, some of them with intaglio, a red-ware Roman lamp and Roman glass bowls, occasionally 'pillared' in mould.

The earliest local ware at Arikamedu is predominantly grey with some proportion of red ware, but the latter shows a progressive increase till it outnumbers the former. Finally a process of devolution sets in, and the red ware gets cruder and cruder. In the pre-Arretine layers some of the pots have basket-impressions, graffito-decoration or incised designs of the simplest kind. The black-and-red ware, usually associated with megaliths, is also present, but in very limited quantities.

Arikamedu was obviously an Indo-Roman coastal trading-station, probably identical with Podouke mentioned in the *Periplus of the Erythraean Sea* (circa A.D. 60-100). It ceased to be active after circa A.D. 200 and was thereafter subjected to spoliation in medieval times, as indicated by stray finds of Chola coins and fragments of Chinese celadon ware.

Y. D. SHARMA

III. NORTHERN BUDDHIST MONUMENTS¹

CONTENTS

			PAGE
1. The origins	...	...	85
2. Piprahwa	...	...	88
3. Lauriya-Nandangarh	...	...	88
4. Vaiśālī	...	...	89
5. Sanchi	...	...	90
6. Bairat	...	...	91
7. Sarnath	...	...	92
8. Kasia	...	...	93
9. Bodh-Gaya	...	...	93
10. Nālandā	...	...	94
11. Rajgir	...	...	95
12. Saheth-Maheth	...	...	96
13. Kauśāmbī	...	...	96
14. Ratnagiri	...	...	97
15. Devnimori	...	...	98

1. THE ORIGINS

THE PLACES CONNECTED WITH THE FOUR PRINCIPAL events of Buddha's life, viz. his birth, enlightenment, first preaching and decease, which took place respectively at Lumbinī, Bodh-Gaya, Sarnath and Kasia, were looked upon with greatest sanctity. To these were added four other places also intimately

¹ For places mentioned in this chapter, see map, fig. 2, p. 99. The rock-cut Buddhist monuments are dealt with in chapter V.

NORTHERN BUDDHIST MONUMENTS

associated with his life, viz. Śrāvastī, Sāṅkāśya, Rājagṛiha and Vaiśālī, which together with the first four were regarded as the eight holy places (*aṣṭa-mahāsthānas*), celebrated alike in Buddhist lore as well as art. At Śrāvastī (below, p. 96) and Sāṅkāśya (modern Sankisa, District Farrukhabad) Buddha is believed to have performed great feats of miracles. At Rājagṛiha (below, p. 95) the Master tamed the mad elephant which had been let loose on him by his cousin Devadatta. Vaiśālī witnessed the memorable event of the offer of honey to the Master by the monkeys. There were several other places in the present States of Bihar and Uttar Pradesh, such as Nālandā (below, p. 94) and Kauśāmbī (below, p. 96) which were also hallowed by Buddha's visits during his ministry extending over nearly half a century. It is but natural that those places should be adorned by devout Buddhists with shrines, *stūpas* and monasteries. Further, according to tradition king Aśoka (273-32 B.C.) opened the eight out of the ten original *stūpas* enshrining the body-relics of the Master and distributed them into eightyfour thousand *stūpas*, which he is said to have erected throughout the length and breadth of his vast empire. This explains why sites like Sanchi (below, p. 90) and Taxila (West Pakistan) have such fine Buddhist monuments, even though they were not visited by Buddha.

The earliest Buddhist monuments in India are attributable to Aśoka, who exerted his energies and the resources of his empire to the propagation of Buddhism. He is credited with the authorship of three principal types of monuments, viz., (1) pillars, (2) *stūpas*, and (3) rock-cut caves, of which the first two have Buddhist associations. Aśoka set up at least thirty pillars including ten inscribed with his edicts on sites which are scattered in Districts Champaran

ORIGINS

and Muzaffarpur of north Bihar, in the Nepal *Tarai*, at Sarnath near Varanasi and Kauśāmbī near Allahabad, in the Meerut and Ambala Districts and at Sanchi in central India. Made of Chunar sandstone and bearing a highly lustrous polish, the pillars are tapering monolithic shafts, between 10 and 15 m. high, with an ornamental capital, surmounted by powerful animal-sculpture of symbolical significance. Distinguished by dignity, exquisite finish and monumental quality, these free-standing columns probably formed part of larger architectural schemes on sites like Sanchi and Sarnath. The best-preserved pillar is that at Lauriya-Nandangarh (District Champaran), which is complete with the Aśokan edicts and a capital crowned by a stately figure of lion (pl. XVII A).

The *stūpa* originated as a piled-up burial-tumulus and constituted the most characteristic monument of Buddhist religion, although *stūpas* of other faiths are not unknown. Symbolizing the decease (*parinirvāṇa*) of Buddha, the *stūpa* came to be looked upon as an object of Buddhist cult-worship by the time of Aśoka, who, as stated above (p. 86), is believed to have erected an enormous number of *stūpas* over Buddha's relics which had originally been enshrined in eight or ten monuments. *Stūpas* were of three types and were built either to enshrine the body-relics (*śārīrika*) or the personal effects (*pāribhogika*) of Buddha and Buddhist saints or to commemorate spots and events of religious significance (*uddeśika*). In course of time, the dedication of *stūpas*, with or without relics, was considered an act of highest piety and numerous 'votive' *stūpas* of smaller size, some containing scores or hundreds of clay replicas of tiny *stūpas* were put up around larger Buddhist *stūpas* or shrines.

NORTHERN BUDDHIST MONUMENTS

The *stūpa* was a solid structural dome (*aṇḍa*), usually raised on one or more terraces and surmounted by a railed pavilion (*harmikā*) from which rose the shaft of the crowning umbrella (*chhatra*). The *stūpas* had one or more circumambulatory passages (*pradakshina-patha*) which were usually enclosed by railing (*vedikā*). The earlier *stūpas* were hemispherical in shape with a low base, while the later ones assumed an increasingly cylindrical form with a well-developed drum. In the later examples, which tended to be more ornate, the base-terraces and the umbrellas were multiplied.

2. PIPRAHWA

The only brick *stūpa* of a probable pre-Aśokan date is that at Piprahwa in Basti District of Uttar Pradesh, which yielded among its relics a vase, inscribed in characters believed to be pre-Aśokan, and a figure in gold relief, representing the mother-goddess in a frontal pose. The *stūpa*, built of large bricks, has a diameter of 35 m. and an extant height of 6·6 m., indicating a low ratio of height to diameter, which is a sign of antiquity. According to the inscription on the relic-casket, the relics found in the *stūpa* pertained to Buddha himself (pl. XVII B).

3. LAURIYA-NANDANGARH

Lauriya (District Champaran) contains, besides an inscribed Aśokan pillar, fifteen *stūpa*-mounds. Four of them were excavated in 1904-07 and as two of them yielded a deposit of burnt bones with charcoal and a gold leaf with a mother-goddess figure (akin to the one from Piprahwa), they were regarded by the excavator to be Vedic burial tumuli. As a

result of their re-examination in 1935-37 they were definitely recognized to be *stūpas* of mud or mud-bricks with baked-brick revetments (in two cases with actual brick-lining) and were regarded as roughly contemporary with the Piprahwa *stūpa* on account of the analogous find of the mother-goddess figure on the gold leaf.

Nandangarh, about 2 km. from the Aśokan pillar, represents a fortified habitation-site. At one end of the site was excavated a large brick *stūpa* reared up on multiple polygonal terraces with numerous re-entrant angles. This edifice, of the early centuries A.D., is the earliest example of a form of terraced *stūpa* which culminated in the celebrated monuments of Paharpur in East Pakistan and Borobudur in Java, both dating from *circa* A.D. 800.

4. VAIŚĀLĪ

Vaiśālī (District Muzaffarpur), which was the birth-place of Mahāvīra and a favourite resort of Buddha, has an uninscribed Mauryan pillar, besides extensive remains of ancient shrines, *stūpas* and habitations including a fortified citadel (*garh*). A *stūpa* was excavated here by Dr. A.S. Altekar in 1957-58. It was seen to have started as a mud *stūpa* of unpretentious size (7·5m. in diameter) in the pre-Mauryan age and was enlarged four times, the first enlargement being executed in neat brickwork during the Mauryan times. From the find of a relic-casket within an ancient breach inside the core of the *stūpa*, the excavator surmised that this was the *stūpa* built by the Lichchhavis over their share of the body-relics of Buddha, which, according to tradition, were opened up by Aśoka for redistribution of the relic-contents.

NORTHERN BUDDHIST MONUMENTS

5. SANCHI

Sanchi was a flourishing Buddhist settlement teeming with temples, monasteries and *stūpas*, dating from the Mauryan to the medieval ages. The original nucleus of Stūpa 1, attributed to Aśoka, was a low brick structure, of almost half the diameter of the present *stūpa* (pl. XVIII), in the core of which it is now concealed. This structure, built of large bricks, was much damaged when excavated. Presumably it was hemispherical in shape with a raised terrace at the base, enclosed by a wooden railing, and a stone umbrella at the summit, of which pieces were recovered from the site. The only other structure which went with this was the Aśokan pillar which stands at its original place near the southern gateway. About a century later, the original brick *stūpa* was enveloped in a stone casing and was enlarged to its present dimensions (diam. over 36 m., ht. 16·46 m.) to form an almost hemispherical dome, truncated near the top. At the same time a lofty terrace, approached by a double flight of steps on the southern side, was built against its base to serve as a processional path. The masonry of the dome and terrace was originally covered with plaster decorated with colour. At the summit of the *stūpa* was built a diminutive square railing with a pedestal, from which rose the shaft of the triple umbrella that crowned the superstructure. Another paved processional path was provided on the ground-level which was enclosed by a plain and massive stone-balustrade. This balustrade, consisting of tenoned uprights, triple cross-bars of a lenticular section and copings with scarf-joints, was obviously copied from a wooden prototype and formed the gift of individual donors.

SANCHI

It was in the latter half of the first century B.C. that the four lavishly-carved gateways were erected, one in each cardinal direction (pl. XIX), as magnificent entrances to this imposing monument. These were manifestly conceived in wood and executed in stone, and each of them, over 10 m. high, was alike in design and consisted of two square uprights, surmounted by capitals, which in their turn supported three architraves with a row of sculptured balusters in between. Each of them was carved on both faces with the *Jātaka* tales, scenes from the life of Buddha and miscellaneous motifs, the entire composition being significantly crowned by the symbol of *dharmachakra*.

6. BAIRAT

Remains of a Mauryan brick *stūpa* of a unique type have been recovered at Bairat (Jaipur District). Of the *stūpa* only bits of foundation have survived together with pieces of a stone umbrella and a bowl, bearing the distinctive Mauryan polish, the former being probably the crowning member of the *stūpa*. The main interest of the monument lies in the enclosing circular shrine (diam. 8.23 m.) which was made of lime-plastered panels of brickwork alternating with twentysix octagonal pillars of wood. The shrine was entered from the east through a small portico, supported on two wooden pillars and was surrounded by a circular processional path with an opening on the east, the whole being enclosed at a later date within a rectangular compound containing an open space for assembly in front of the entrance. This *stūpa*-shrine resembles on plan and in design a circular *chaitya*-cave in the Tulaja-leṇa group at Junnar (below, p. 116).

7. SARNATH

Sarnath, where Buddha first preached the Law, was among the four holiest places of Buddhism and developed as one of the greatest Buddhist establishments of India. Excavation at the site conducted between 1904 and 1928 uncovered numerous temples, *stūpas* and monasteries, the earliest attributable to the time of Aśoka.

The nucleus of the brick-built Dharmarājikā Stūpa, comprising a hemispherical dome (diam. 18·3 m.) with a low terrace at the base, was probably built by Aśoka. A monolithic railing bearing a Mauryan inscription and polish, found near the *stūpa*, presumably formed its *harmikā*. The inscribed Aśokan pillar with the celebrated lion-capital (pl. LXXXIII), which was recovered not far from the *stūpa*, appears to have formed part of its architectural scheme. The original *stūpa* was encased in six successive ones, each larger than the other, which range in date from the second to twelfth century.

Notable among other edifices is a square Gupta temple with rectangular chapels on three sides and a flight of steps on the fourth, representing probably the high *mūlagandha-kuṭī* seen by Hiuen Tsang in the seventh century.

The Dhamekh Stūpa (pl. XX) at Sarnath is an imposing cylindrical structure (extant height 43·5 m., diam. at the base 28·3 m.) of the Gupta age, partly built of stone and partly of brick. Its stone basement has eight projecting faces with large niches for statuary and is further adorned with delicately-carved floral and geometrical patterns.

The site has a number of monasteries, ranging in date from the fourth to the twelfth century A. D.,

SARNATH

showing the usual plan. The latest of these was built, according to an inscription, by Kumāradevī, the Buddhist queen of Govindachandra of Kanauj (1114-55).

The Chaukhaṇḍī mound, about 1 km. to the south of the main settlement, represents the ruins of a towering Buddhist *stūpa* or shrine surmounted by an octagonal tower built by the Mughal emperor Akbar.

Sarnath was also one of the greatest centres of sculptural art in north India from the Mauryan to the late Gupta times, the lion-capital and the preaching Buddha (pl. LXXXVIII) being among the masterpieces of Indian art.

8. KASIA

Kasia (District Deoria), which marks the site of Kuśīnagara, the place of the *parinirvāṇa* of Buddha, is one of the four holiest sites of Buddhism. The site was first excavated in 1876 and again between 1904 and 1912, resulting in the clearance of the Nirvāṇa *stūpa*, assignable on the evidence of an inscribed copper-plate to the Gupta age, and of several shrines and monasteries, largely of the same age. The latest monastery was built by a local Kalachuri chief in the twelfth century.

9. BODH-GAYA

Marking the holy spot of the enlightenment of the Master, this site is looked upon with greatest sanctity and became a flourishing Buddhist establishment with numerous temples, *stūpas* and monasteries. According to tradition a large number of shrines and memorials were erected at the site to

NORTHERN BUDDHIST MONUMENTS

commemorate the incidents before and after enlightenment but only few can now be recognized. Of the earliest shrine, traditionally attributed to Aśoka, only the *vajrāsana* or the sandstone throne with the characteristic Mauryan polish and decorative designs has survived and is seen beneath the holy Bodhi tree. To the Śunga period belongs a portion of the sandstone railing carved with bas-reliefs, typical of the age. The remaining portion of the railing pertains to the Gupta period. The main brick-built shrine known as the Mahābodhi temple (pl. XXI), which appears to have been originally erected in *circa* second century A.D., is encumbered with heavy renovations, the four corner-towers being an arbitrary addition of *circa* fourteenth century. Its central tower, standing on a high plinth, is about 55 m. high and is a straight-edged pyramid of seven storeys, relieved by pilasters and *chaitya*-niches, substantially agreeing with its description left by the Chinese pilgrim Hiuen Tsang. The remaining shrines and *stūpas* mostly belong to the Pāla period (ninth to twelfth centuries).

10. NĀLANDĀ

According to literary tradition, Nālandā, 10 kilometres north of Rajgir and a suburb of the ancient city, was visited by Buddha and Mahāvīra. Aśoka is said to have worshipped at the *chaitya* of Sāriputra, Buddha's disciple, and erected a temple. But the excavations which were conducted here from 1916 onwards have not revealed any pre-Gupta remains. By the time of Harsha (A.D. 606-48) Nālandā had become the principal centre of Mahāyāna learning and a famed university-town with numerous shrines and monasteries which attracted scholars

NĀLANDĀ

from far and near. The Chinese pilgrim Hiuen Tsang and I-tsing studied at Nālandā and have left accounts of the settlement and its life.

Nālandā had a planned lay-out with an almost symmetrical row of monasteries facing a row of temples, with wide spaces in between. The temples were solid rectangular structures of two tiers, the sanctum being placed on the upper tier which was approached by a grand flight of steps. The façades of both the tiers were plastered and embellished with elegant pilasters and niches containing images. Temple 3 was more than 31 m. high and consisted of seven successive accumulations of which the two latest belonged to the eleventh and twelfth centuries and the fifth one, dating from *circa* sixth century, was notable for its sculptural wealth (pl. XXIII). The monasteries (pl. XXII) were imposing rectangular buildings, each with an open courtyard, enclosed by a covered verandah which leads into cells, arrayed on the four sides. The cell facing the entrance served as a shrine.

Nālandā was an important centre of Pāla sculptures and bronzes and has also yielded seals and sealings of great historical significance.

11. RAJGIR

Rajgir (District Patna), representing ancient Rājagṛiha or Girivraja, was the capital of the ancient kingdom of Magadha and a flourishing city in the days of Mahāvīra and Buddha who visited it frequently. It was also the venue of the first Buddhist council, held shortly after the *nirvāṇa* of Buddha.

The ruins of Rajgir, (above, p. 60) which have been partly excavated, cover an extensive area within and outside the hill-enclosure and include the ancient

NORTHERN BUDDHIST MONUMENTS

defences and remains of habitations, shrines, *stūpas* and monasteries. A monastery with large elliptical halls, identified as Jīvākāmravana, mentioned in the Buddhist texts as a favourite retreat of Buddha, has been recently excavated within the valley.

12. SAHETH-MAHETH

The Jetavana monastery at Śrāvastī, the capital of the Kosala kingdom, was the scene of many a sermon of Buddha and has been identified with the twin sites of Saheth-Maheth, located in Gonda and Bahraich Districts of Uttar Pradesh. Excavations conducted between 1907 and 1911 have revealed at Saheth, representing ancient Jetavana, a number of shrines, monasteries and *stūpas*, the earliest of which, probably of the Mauryan age, yielded a sandstone casket containing bone-relics together with a gold leaf and a silver punch-marked coin. Maheth, representing Śrāvastī, is a fortified town with ruins of residential houses as well as brick *stūpas* and shrines, one of which exhumed more than three hundred terracotta panels, depicting scenes from the *Rāmāyaṇa* in the Gupta style.

13. KAUSĀMBĪ

Kausāmbī (District Allahabad), the reputed capital of the ancient Vatsa kingdom, is one of the oldest and richest historical sites of India, claiming intimate association with Buddha. Following a small excavation by the Archaeological Survey in 1937-38, the site is being continuously excavated by the Allahabad University since 1949. The excavations have thrown light on the age and character of the massive fortifications which enclose the ancient

ruins and of the connected habitations(above, p. 53). In a corner of the fortified city have been cleared the extensive remains of the Ghoshitārāma monastery, intimately associated with Buddha, which show continuous occupation from *circa* sixth century B.C. to sixth century A.D. when it was destroyed by the Hūṇas.

14. RATNAGIRI

The excavation conducted since 1958 at the Buddhist site on the Ratnagiri hill in District Cuttack of Orissa has confirmed the testimony of the late Tibetan traditions that Ratnagiri was a great centre of Mahāyāna and Vajrayāna learning and art.

The main *stūpa*, made of brick, had a base measuring 14·5 m. square with six elegantly-moulded projections on each side and a circular drum, the interior of which was designed as a wheel with twelve spokes with the interspaces packed with mud-filling. Dating from *circa* eighth century, it was twice enlarged and enclosed by numerous votive *stūpas* of brick and stone, including clusters of miniature monolithic ones.

Facing the main *stūpa* were two brick monasteries in a row, with the usual plans, the larger one measuring 54·8 m. square and the smaller one 29 m. square. One of them had a magnificent entrance-porch flanked by pylons and a shrine in the back wall with elaborately-carved stone door-frames, exhibiting a rich wealth of sculptural and decorative ornaments (pl. XXIV). At least this monastery was multi-storeyed and was in occupation from *circa* eighth to thirteenth century. The second one had also a shrine in the back wall.

The site has yielded a rich crop of Buddhist images of bronze and stone and terracotta sealings

NORTHERN BUDDHIST MONUMENTS

and excels all other excavated monuments in sculptural exuberance.

15. DEVNIMORI

The recent excavation at Devnimori in District Sabar-Kantha of Gujarat has exposed the remains of a large Buddhist establishment, comprising a brick *stūpa* and monastery. The *stūpa* with a cupola, resting on two square platforms, is a massive edifice measuring 26 m. square and is more than 10·4 m. high. The lower platform, which served as a processional path, was divided into eleven bays by twelve Indo-Corinthian pilasters, while the upper platform was adorned by ten similar pilasters on each face. The central bay on each face contained an ornate arch, while each alternate bay appears to be adorned with a Buddha image in terracotta. Thus the façades of the *stūpa* were elaborately embellished with statuary and decorative patterns including pot-and-foilage, scrolls and dentils. This monument resembles the brick *stūpa* at Mirpur-Khas (West Pakistan) in design and style and elegance of terracotta sculpture. The discovery from the heart of the *stūpa* of an inscribed relic-casket recording that the 'great *stūpa*' was built near the 'great monastery' during the reign of (the Western Kshatrapa) king Rudrasena (III) in the year 127 (A.D. 375) probably dates it to the second half of the fourth century. There is evidence to show that the *stūpa* underwent reconstructions later on.

The monastery, showing the usual plan, measures 36·5 m. square. It is much dilapidated but appears to represent three phases of reconstruction.

KRISHNA DEVA



FIG. 2

IV. SOUTHERN BUDDHIST MONUMENTS ¹

CONTENTS

	PAGE
1. The centres	100
2. The <i>stūpas</i>	101
A. The components	101
B. The early specimens	102
C. Amaravati	104
D. Nagarjunakonda	105
3. The <i>chaitya</i> -halls and monasteries	106
4. Nagapattinam	108

1. THE CENTRES

BY FAR THE LARGEST NUMBER OF STRUCTURAL Buddhist monuments in south India are confined to the eastern Districts of Andhra Pradesh lying between the rivers Vamsadhara close to the southern borders of Orissa in the north and Pennair to the north of the Tamil country in the south. The numerous *stūpas* and associated *vihāras* and *chaitya*-halls are found located amidst picturesque natural surroundings in the sheltered valleys of hills on the lower reaches of the Vamsadhara, the Godavari and the Krishna and their affluents, as also on other smaller streams or near large lakes fed by them, always a little removed from neighbouring towns. The ruins are seen at Salihundam (Srikakulam District),

¹For places mentioned in this chapter, see map, fig. 2, p. 99. The rock-cut Buddhist monuments are dealt with in chapter V.

CENTRES

Ramatirtham, Sankaram and Kotturu (Visakhapatnam District), Kapavaram and Kodavalli (East Godavari District), Arugolanu and Guntapalli (West Godavari District), Jaggayyapeta, Ramireddipalle, also called Gummididurru, Alluru, Vijayawada, Gudivada and Ghantasala (Krishna District) and Nagarjunakonda, Bhattiprolu, Chejarla, Garikapadu, Goli, Amaravati, Peddamaddur, Kanuparti, Pedda-Ganjam and Chinna-Ganjam (Guntur District). The largest number of the sites are thus concentrated in Guntur and Krishna Districts.

Buddhism may have spread to this region even in pre-Aśokan times, but the remains date from the third century B.C. and later.

2. THE *STŪPAS*

A. THE COMPONENTS

While the earliest form of the *stūpa* was a low hemispherical dome (*aṇḍa*), the later ones had their domes raised over a basal cylinder (*medhi*), the top surface of which provided an upper circumambulatory (*pradakshinā-patha*) round the dome, often with a balustrade on its edge. This balustrade or parapet was formed of vertical slabs mortised between uprights with a coping on the top. Often, projected as offsets from the four cardinal sides of the *medhi*, were platforms, carrying on their tops, in the case of some large *stūpas*, a row of some tall slender monolithic pillars called *āyaka*-pillars. These pillars and the *āyaka*-platforms on which they rested are sometimes regarded as characteristic of the *stūpas* of this region. On the top of the *aṇḍa* was the usual *harmikā* enclosing an umbrella (*chhatra*) or a series of them (*chhatrāvali*).

SOUTHERN BUDDHIST MONUMENTS

At the ground-level, the lower *pradakshina-patha* was sometimes enclosed by a railing, wooden in the first instance but often of stone even in the earlier examples. The entrance to the railed enclosure was plain, any elaborate gate (*torana*) adorning the entrance, as at Sanchi, being absent. The brick-work of the *aṇḍa* and *medhi*, as also the *āyaka*-platform, was, in the earlier and simpler examples, plastered over, usually with a large-looped garland picked out in stucco as an adornment round the *aṇḍa*. While the earlier *stūpas* were solid and sometimes massive, structures, like the one at Sanchi, the later ones had often different adaptations of internal structural supports with voids filled with suitable packing-material in between—expedients designed to conserve brick and at the same time to ensure strength and stability, for this was to bear the weight of the immense hemisphere and also of the casing of limestone slabs which often formed another notable feature of the *stūpas* of the region.

B. THE EARLY SPECIMENS

The large *stūpas* at Bhattiprolu and Gudivada, the earliest in the series (third century B.C.), were solidly built. The former was a low hemispherical mound with a basal diameter of 40 m., its railing having a diameter of 45 m. The limestone casing round its base was sculptured only in the region of the *āyaka*-platforms, the rest being of more or less plain slabs showing little carving except perhaps in the form of pilasters in low relief reaching up to the edge. The railing round the base was of limestone, the vertical posts (*ūrdhvapaṭa*) being with laterally-cut lenticular mortises into which similarly-shaped cross-pieces (*sūchi*) were fitted, the top having a

STŪPAS

coping (*ushṇīsha*). The *sūchis* were plain and unsculptured.

The Gudivada *stūpa*, of almost similar dimensions and with a basal diameter of over 39 m., was also solid-built, as the one at Bhattiprolu but had its *aṇḍa* raised over a taller *medhi*. It had a wooden railing.

The Garikapadu *stūpa*, with a basal diameter of about 25 m., had an outer brick ring about 2·5 m. thick at the base, the hollow interior being packed with alternate layers of lime-concrete and earth.

The Jaggayyapeta *stūpa*, with a basal diameter of 19 m., had inside its outer brick casing a core formed of superposed layers of earth, each about 60 cm. thick, separated from each other by compact brick floors. The casing-slabs round the *medhi* had little or no sculpture, but the slabs of the *āyaka*-platform had some. The largest of the three *stūpas* at Pedda-Ganjam was more or less of this type, with a diameter of 22·5 m. at the base.

The Ghantasala *stūpa*, 37 m. in diameter at the base, had a central brick column 3 m. square, with a concentric outer square 6·7 m. wide, the whole surrounded by two concentric circles, the outer forming the bases of the *medhi* and the inner rising up into the dome. Internal cross-walls forming radial projections from one ring to another, in addition to those formed by extensions of the sides of the square beyond their corners, furnished additional strength, the voids or 'chambers' being filled with packing. The *medhi* had a parapet of stone slabs mortised between uprights.

The second large *stūpa* at Pedda-Ganjam had a more or less similar construction, consisting of two concentric walls, the outer about 12 m. in diameter, the gap between the two walls being 1·55 m., with

SOUTHERN BUDDHIST MONUMENTS

four radial walls penetrating into the centre with more cross-walls between the two circles, thus anticipating the regular cart-wheel plan of Nagarjunakonda (below, p. 106) and some other Āndhra *stūpas*.

The *stūpa* at Goli was a small stone-cased structure, with exquisite sculptures akin to those of the later phase of Amaravati.

The earliest structural stone *stūpa*, built of cut-stone blocks, is to be found at Guntapalli. It is 4·9 m. in diameter at base, with a drum 1·5 m. high. It dates earlier than the Christian era. Another stone *stūpa* is found at Ramatirtham; it is 1·5 m. in diameter at the base and 2·1 m. in height.

C. AMARAVATI

In its ultimate form, the Amaravati *stūpa* typifies the class of brick *stūpas* with a stone slab veneering round the drum and lower parts of the dome. Sumptuously sculptured and carved in its prosperous days, it is now in utter ruins, and its architecture and embellishments are mostly to be inferred from its extant remains and many replicas carved in relief on what formed the casing-slabs, found at the site. Its outer stone railing had a diameter of 58·5 m. and a height of about 4 m. At the four cardinal points the railing projected into an open entrance flanked in front by two pillars and by sedant lions on their copings. The *pradakshina-patha* inside was 4·6 m. wide, with a series of pillars set at intervals, bearing miniature *stūpas* or other symbols on the top. The *stūpa* proper had a basal diameter of about 48·5 m. round the base of the *aṇḍa*. The top *harmikā* was a square balustrade with an imposing pillar in the centre flanked and surmounted by umbrellas. In

STŪPAS

its primary form the *stūpa* was simple like the earliest ones, but it was subsequently renovated and enlarged. Originally it had, like those at Bhattiprolu, Jaggayyapeta and Garikapadu, the slabs encasing the *āyaka*-platforms alone more elaborately sculptured than the rest of the drum, which had more or less plain slabs with little carving, except perhaps for pilasters in low relief at the edges (as at Bhattiprolu and Jaggayyapeta); these pilasters carried animal figures over their campanulate capitals. In addition, there were reliefs of devotees flanking Buddha's symbols. Even during its renovations, the sculptor devoted the greatest attention to the *āyaka*-platform, as in other *stūpas* elsewhere. The circumambulatory over the *medhi* (as can be judged from the remains here and at Ghantasala, Pedda-Ganjam, Nagarjunakonda and Jaggayyapeta) had a parapet on its outer edge, formed of rectangular slabs mortised between uprights fixed at intervals, with a running coping on the top. It would appear that the inner faces of these slabs were finely sculptured. The stone railing at the ground-level, dating from 200 B.C., was subsequently enlarged in the course of reconstruction: it emerged in its final architectural and embellished form (pl. XXV) between A.D. 150 and 200. Then followed the last phase of embellishment of the *stūpa*, when some of the earlier sculptured slabs covering its basal parts were reversed and their erstwhile unsculptured inner faces trimmed and covered with fine sculptures in the period between A.D. 200 and 250.

D. NAGARJUNAKONDA

The great *stūpa* at Nagarjunakonda (pl. XXVI A) belongs to the class of uncased *stūpas*, its brickwork

SOUTHERN BUDDHIST MONUMENTS

being plastered over and the *stūpa* decorated by a large garland-ornament round its *aṇḍa*. The original *stūpa* was renovated by the Ikshvāku princess Chāmtisiri in the third century A.D., when *āyaka*-pillars of stone were erected. The outer railing, if any, was of wood, its uprights erected over a brick plinth. The *stūpa*, 32·3 m. in diameter, rose to a height of 18 m. with a 4-m. wide circumambulatory. The *medhi* itself rose to a height of 1·5 m, and the *āyaka*-platforms were rectangular offsets measuring 6·7 by 1·5 m. In its construction the *stūpa* shows a great advance: it had a circular central column, with eight radial walls meeting a peripheral circular wall, thus producing the appearance in plan of a cart-wheel with its hub, spokes and felly. There was a second concentric wall outside with further projections of the radial walls up to it, the two peripheral walls thus forming the bases of the *aṇḍa* and *medhi* respectively, while the inner cross-walls and the filling in between afforded support. Many of the other *stūpas* at Nagarjunakonda (pl. XXVI B) also had the same plan of construction. Also, many of them were cased with sculptured stone slabs.

3. THE *CHAITYA*-HALLS AND MONASTERIES

In association with these *stūpas*, pertaining to the Hinayāna and Mahāyāna forms of Buddhism, there were *chaitya*-halls and *vihāras* or monasteries, also brick-built. At Guntapalli are found remains of a large *vihāra* and pillared hall. The *chaitya*-hall of the place, of the second century A.D., was 16·5 m. long and 4·8 m. wide, with its walls 1·4 m. in thickness. The semi-circular apse was cut off from the main

CHAITYAS AND MONASTERIES

hall in front by a cross-wall with entries into a circumambulatory round the object of worship placed in the apse—perhaps a Buddha image on a high pedestal. This is one of the largest brick *chaitya*-halls, a second one being a ruined one at Vidyadharapuram near Vijayawada. At Ramatirtham are extensive remains of a monastery associated with the large *stūpa*, 25·6 m. in diameter. There were two large *vihāras*, respectively, $24\cdot7 \times 19\cdot8$ m. and $27\cdot7 \times 12\cdot1$ m., five *chaitya*-halls and a number of smaller *stūpas*.

Nagarjunakonda, as a result of extensive excavations, has revealed a large number of *vihāras* and *chaitya*-halls (pl XXVII A), through which the typical plans and constructional details of these structures can be well-studied. Most monastic establishments of the place were complete and self-contained units, with a *vihāra* or residence for the monks and an apsidal *chaitya*-hall or temple, both attached to a focal *stūpa*—the hypaethral object of worship. The *vihāra* had a rectangular courtyard with a central stone-paved hall covered by a roof borne on pillars of wood or of limestone. All round the courtyard was a row of cells with a verandah in front. While most of the cells were for resident monks, some were used for stores and a large one as a refectory. In front of the entrance to the residential part, on either side of the passage, was a small apsidal *chaitya*-hall, one of which enshrined a *stūpa*-form and the other a symbol, such as the feet of Buddha or a physical representation of Buddha himself (pl. XXVII B.)—thus often coming to be described respectively as the *stūpa-chaitya* and *Buddha-chaitya*. In addition, there were also a number of individual *chaityas*, like the ones near the main *stūpa*. The *stūpas* inside many later

SOUTHERN BUDDHIST MONUMENTS

chaitya-halls were often stone-built.

On the Sankaram hills are found remains of a large monastery in association with rock-cut monolithic *stūpas* and three structural *chaitya*-halls, dating from the second century B.C., though the site continued to be occupied till many centuries later.

At Salihundam, there is a similar pair of *chaitya*-halls, the Buddha-*chaitya* and the *stūpa-chaitya*, in front of the *mahā-stūpa*. Some of the *chaitya*-halls are circular on plan (pl. XXVIII). Close by are the ruins of a monastery.

4. NAGAPATTINAM

In the Tamil land, at the important port-town of Nagapattinam (Thanjavur District), there seems to have existed a Buddhist establishment from at least the Pallava times in the eighth century. It flourished under the patronage of the succeeding Chōḷa kings: a Buddhist temple was built here in the time of Rājarāja I (eleventh century) in token of his relationship with the Śrīvijaya kingdom in the Malaya peninsula. This temple, called Chūdāmaṇi-varma-*vihāra*, suffered destruction in the thirteenth century at the hands of a later Chōḷa king, but part of it was standing till the eighteenth century, when it was pulled down by the Jesuit settlers. It was a storeyed structure in brick with some affinities with east Asian monuments.

K. R. SRINIVASAN

V. ROCK-CUT MONUMENTS¹

CONTENTS

	PAGE
1. Introduction	109
2. The earlier monuments... ..	110
A. Bihar	110
B. The Deccan and Gujarat... ..	113
C. The Āndhra region	119
D. Orissa	121
3. The later Buddhist caves	123
A. Gujarat and central India	123
B. The Deccan	124
(i) The main features	124
(ii) Ajanta	125
(iii) Ellora	128
(iv) Aurangabad	128
4. The Brāhmaṇical and Jaina cave-temples	130
A. Udaigiri	130
B. The Deccan	132
(i) Badami	132
(ii) Aihole	133
(iii) Ellora	134
(iv) Elephanta	136
(v) Jogeśvarī	137
C. The Āndhra region... ..	138
D. The Tamil land	141
(i) The Pallava cave-temples	141
(ii) The Pāṇḍya cave-temples	145
(iii) The Muttaraiyar cave-temples	147
5. The cut-out monolithic temples	147
A. The Pallava monuments	147
B. The Rāshtrakūṭa monuments	151
C. The Pāṇḍya monuments	153
D. Monuments in north India	153

1. INTRODUCTION

CONTEMPORARY WITH THE EARLY BRICK-AND-TIMBER architecture Aśoka initiated a movement of

¹For places mentioned in this chapter, see map, fig. 3, p. 156.

ROCK-CUT MONUMENTS

cutting living rocks into architectural forms. This, in the course of a millennium and a quarter from his time, resulted in a series of religious resorts and temples excavated into or carved out of rocks. Such examples as have survived time and weather because of their more permanent fabric are, so to say, petrified versions of the contemporary brick-and-timber or the humbler wattle mud-and-thatch structures. Though in an entirely new material, they reproduce the interiors or exteriors, or often both, of the structural models they imitate even to the smallest architectural detail. As such, these stone copies afford good material for the study of contemporary architecture and related sculpture and embellishment, as also the gradual perfection achieved in expressing architectural and sculptural motifs in the new material.

This mode of excavating into or carving out of rocks and creating partial or total imitations cannot, from the methods involved, be called architecture which would denote building up of component parts, designed with calculations of strength of the components, distribution of load and counter-action of thrusts, stresses and strains. But it can be conveniently designated 'rock-architecture' or 'architectural sculpture' because the products are sculptures of a structural type on a grand scale.

2. THE EARLIER MONUMENTS

A. BIHAR

The eight cave-resorts excavated by Aśoka and his grandson Daśaratha into the hard and refractory quartzose-gneiss of the Barabar and Nagarjuni hills and the outcrop at Sitamarhi near Gaya in Bihar, their home-province, form the earliest of the

EARLIER MONUMENTS

series. These, according to the associated inscriptions, were resorts fashioned out for the Ājivika monks. There are four in the Barabar hills, three in the Nagarjuni hills and one in the Sitamarhi rock. These caves, mostly, are not cut with their linear axis perpendicular to that of the parent rock but are parallel to the lie of the rock with an entrance made at some convenient point along the linear scarp. The most characteristic feature is the fine mirror-like polish of the interior. The Supiyā cave in Barabar and the Gopikā cave which is the largest of the series in Nagarjuni hills, and the Vahiyakā cave in the same hill are simpler in being mere vaulted halls (*śālās*) with a high polish on the interior surface-walls and simple trapezoid entrances with sloping jambs. A more primitive shape, like a Toda hut, is presented by the Vadathikā cave in the Nagarjuni hill and the solitary cave in Sitamarhi rock, where the walls are also curved without any perpendicular sides as in the first-cited examples. Thus, there being no demarcation between the wall of the oblong hall or chamber and its vaulted roof, the section looks arcuate. The Sudāmā cave and Lomās-rishi cave (pl. XXIX), which is partially incomplete and is without an associated Mauryan inscription, are more advanced and form the most important examples. They essentially consist of a *śālā* as above (a *maṇḍapa* with vaulted roof), oblong on plan and connected on one of the shorter sides with a circular cella, both with their linear axis parallel to the outer face of the rock, and with the main entrances located on the long side near the end farther away from the cells. The inner circular chamber, which would correspond to the sanctum (*garbha-griha*) is apparently separated from the *śālā* in front by a wall, which,

ROCK-CUT MONUMENTS

except for the narrow intervening doorway, would complete the circular plan of the chamber. The Lomās-rishi cave has its outer entrance with the usual sloping jambs and a straight lintel framed into a gabled porch or *nāsikā* more elaborately carved in imitation of timberwork on its arched top formed of two curved rafters (*gopānasas*) and filled in by two lunettes, the intervening spaces filled by perforated work above and a frieze of eight elephants below, which are remarkable as specimens of early sculpture. Each pair of opposed elephants is shown in obeisance to a *stūpa*-symbol carved on the radial arm connecting the lunettes with the arch-rafter. Over the curved rafter is shown a roof of laminated planks surmounted by a finial or *stūpi* in front. Likewise the domed roof, *kūṭa*, of the inner chamber shows the pattern of a reed-thatch while the vertical grooves on the exterior face of the cella-wall simulate a palisade of planks or split bamboo.

The Sonbhaṇḍār at Rajgir, of the third century A.D., is the larger of the two excavations here and is a simple *śālā* type, with a ridged barrel-vault roof, which in section resembles an arch. The hall ($10\cdot4 \times 5\cdot2$ m.) is 3·5 m. high at the centre and has its entrance with the usual sloping jambs near one end of the long side on the façade balanced by a window-opening—an innovation—at the other end. Since the scarp is recessed considerably for the façade with the door- and window-openings, there is a sort of a verandah which shows evidences of having been extended by wooden rafters, as can be seen from the mortise-holes left therein. The verandah is prolonged slightly beyond one of the longer ends. The other adjoining cave is a simpler excavation, a more or less square cell with a verandah in front, which again is longer than the cave-façade.

EARLIER MONUMENTS

B. THE DECCAN AND GUJARAT

Though the pioneering work of excavating into such hard and refractory rocks continued for about three generations in Bihar and the Mauryans had simultaneously, as it were, diverted their attention to a great extent to work the softer and more tractable varieties of rock, like the Chunar sandstone, in the shaping and finishing of their monumental free-standing columns and sculptures, the movement of creating architectural forms out of rocks, with the combined experience in stone sculpture, soon shifted its venue to the western part of India. The natural trap-formations of this region were chosen because of the softness in texture and horizontal bedding which rendered easy the work of quarrying, moulding and sculpture. This resulted in a large number of Buddhistic excavations spread over a period of nearly ten centuries and covering the entire trap-area of western Deccan.

The earlier excavations of this series (200 B.C. to A.D. 200), pertaining to the Hīnayāna creed of Buddhism, consist of *chaityas* or temple-halls and *vihāras* or monastic residences, all copies again of structural prototypes in brick-and-timber. For instance, in the case of the *chaityas*, this would be evident not only from the imitated designs and devices peculiar to woodwork but also the actual presence in many cases of woodwork in the roofing and entrance-arches. The more important examples arranged in an approximate chronological series would be those at Bhaja (Poona District), Kondane (Kolaba District), Pitalkhora and Caves 8, 9, 10 and 12 at Ajanta (Aurangabad District), Bedsa (Poona District), the excavations called Pāṇḍu-leṇa and with inscriptions of Gautamiputra, Nahapāna and Śrī-Yajña at Nasik, Junnar and Karle (Poona District),

ROCK-CUT MONUMENTS

at Kanheri in Salsette island near Bombay and Aurangabad.

The *chaityas* are long halls with posterior apsidal end (*chāpa*) and one or more large *torāṇa* or *nāsikā*-openings on the façade which form the most attractive and carefully-designed part of the whole. The façade, relieved with designs of arcade and railing and an occasional sculpture, has often an anterior attachment in the form of a portico or vestibule—a *maṇḍapa*—usually of timber. The chronology is indicated by the stylistic development based essentially on the degree of imitation of the wooden prototype, the earlier being closer to the originals with a liberal use of actual timber, particularly in the façade-screens. The evolution of the *nāsikā*-arch (the so-called *chaitya*-arch) of the façade from a simple to an elaborate curve, of the pillar from simple to more elaborate forms with capitals and of the supports in general from a slant to a perpendicular position, as also the transformation of the shape of the *stūpa*-form from a low dome to almost a cylinder, constitute the criteria for their chronology.

The *chaitya* (pl. XXX) at Bhaja (*circa* 200 B.C.) betrays its initial character in its many features, including a pronounced slant of the pillars, closely-ranked wooden roof-ribs (*gopānasas*), a free use of timber also in other parts as well such as the screens of the façade-openings and an undeveloped *jhasha* or *nāsikā*-arch, similar to that of Lomās-rishi cave. The hall, 16·75 m. long and 8 m. broad, is divided into a central nave with lateral aisles, over 1 m. wide, by two rows of pillars. The roof is vaulted, ending at the rear into a semi-dome, and at the centre of the resulting apse-end is a rock-cut *stūpa* crowned by a wooden *harmikā*, with a circumambulatory in continuation of the lateral aisles.

EARLIER MONUMENTS

The Kondane *chaitya*, a little larger and slightly later in point of time, has a façade of similar type, with the façade-pillars partially of stone instead of being wholly of wood. The façade-arch too displays more finished lines.

The ruined *chaitya* of Pitalkhora and the similar Cave 10 at Ajanta show a slight advance in having rock-cut-roof ribs in place of timber-attachments of the earlier examples. While there are part-constructions of brick, for instance the pillars and *stūpa*-structure at Pitalkhora necessitated by a natural fault in the rock, the Ajanta example is a more ambitious excavation measuring $30.5 \times 12.2 \times 10$ m., and its *stūpa* is more elaborate with a double-tiered base and a slightly-elongated dome. The *chaitya* at Bedsa shows an elaborate façade fronted with pillars and pilasters with capitals, often described as 'Persepolitan', surmounted by spirited sculpture—human and animal.

The Pāṇḍu-leṇa at Nasik and Cave 9 at Ajanta are alike in that they are totally free from timber-attachments even on their façades, which are entirely of the rock-medium. The Ajanta cave-façade is well-balanced and elaborate in design, with a door-opening at the centre flanked by a window on either side and carrying a gallery above on a broad ledge. The hall within is not an apse but an oblong vaulted *śālā* and the ceilings of the aisles, instead of being vaulted as in other cases, are flat. The vault of the *śālā* was originally braced by wooden ribs, evidently removed subsequently. Perhaps these ribs, here and in the earlier and later examples, instead of merely being servile imitations—without function as structural components in the context of rock-excavations,—served as holds for fixing painted canopies (*vitāna*) made of thin planking and cloth.

ROCK-CUT MONUMENTS

The ornamental façade of the Pāṇḍu-leṇa is two-storeyed, presenting a curved lunette above the doorway and an arcade with repeated *stūpa*-motif and 'Persepolitan' pillars flanking the arch-opening. The pillars inside are almost perpendicular, show better proportions and have a pot-base and square abacus, while the *stūpa* at the rear has a tall cylindrical drum. There was a musicians' gallery immediately inside and above the doorway.

The contemporary Manmodā *chaitya* at Junnar shares many of the features of the Pāṇḍu-leṇa, including the carved lunette on the façade, absence of a wooden frontage and portico and presence of the same type of pillars inside. Of the four other excavations in Junnar of about the same date, the Tulajā-leṇa is remarkable for its circular plan (7.75 m. diameter), recalling the example at Guntapalli on the east coast (below, p. 119) and indicating the survival of perhaps another archaic type of *chaitya* (temple), viz., the *vṛitta* type. The central *stūpa* is surrounded by a ring of twelve plain pillars of octagonal section carrying a dome on top, while the circular aisle or circumambulatory is half-domed, much like the Sudhamma-sabhā of the well-known Bharhut reliefs. There is a similar *chaitya* at Kondavite.

The magnificent *chaitya* at Karle (pl. XXXI), $38 \times 14.2 \times 13.7$ m., is the largest and most evolved of the series marking the culmination of Hīnayāna rock-architecture. The ornate façade is two-storeyed as at Nasik, with three doorways in the lower part and an upper gallery over which is the usual horse-shoe, *nāsikā*-arch, showing remains of concentric arches forming a pediment. Sculptures of donor-couples intervene between the door-openings as also indifferent later palimpsests of Buddha figures in the lower storey. The setback of the entrance provides

EARLIER MONUMENTS

a frontal porch, the sides of which are filled by sculptures of architectural storeys, the lowest showing a grand frieze of elephants. In front are two free-standing *dhvaja-stambhas* or *dharma-stambhas* with 'Persepolitan' capitals, surmounted by addorsed lions originally supporting a *dharma-chakra*, like the Aśokan columns. The great pillars which separate the central nave from the aisles are truly perpendicular with pot-bases, octagonal shafts and 'Persepolitan' capitals, with abacus carrying beautiful pairs of kneeling elephants, each bearing a couple in front and caparisoned horses with their riders. The interior *stūpa* is tall and with cylindrical drum surrounded by two courses of railing. The original wooden umbrella on the top is intact. This *chaitya* is indeed one of the most magnificent monuments of India.

The last of the series is the Kanheri *chaitya*, 26·2 × 12·2 × 15·2 m., much resembling the Karle *chaitya*, of which it is nothing but a rather degenerate copy. The interior had wooden rib-rafter, the pegs of which are still *in situ*; the presence of rafters in an otherwise very highly evolved excavation like this was purposeful, as indicated earlier (p. 115). The outer screen is modelled with large figure-sculptures of donors, which in their forms and execution maintain intact the sculptural standards of Karle. In front were the lion-pillars, not free-standing as at Karle but attached to the rock.

Among the excavations at Aurangabad, the solitary example of Hīnayāna *chaitya* amidst a group of late Mahāyāna *vihāras* is interesting. Though half-ruined, this small *chaitya* exhibits many characteristics of the Hīnayāna phase, having a simply-designed plain and low *stūpa* at its apse. This and other features, such as the rib-vaulting of the main nave,

ROCK-CUT MONUMENTS

though the aisles are flat-roofed, the plainness of the interior, the octagonal pillars and the curved panels in the frieze over the capitals at the base of the apse-vault would all indicate its very early character and assign it to the second-third century A.D.

The extant remains on the hills of the ancient city of Junagadh indicate the presence of numerous rock-cut caves of presumably Buddhist origin, mostly ruined at present. Some seem to have had ancient inscriptions which, according to Colonel Tod, were of the Aśokan period. The extant remains on the scarp of the hill-fort called Ūparkoṭ and Naudurgā appear to represent the most ancient caves, perhaps coeval with the Barabar-Nagarjuni group. They are plain excavations and do not exhibit much by way of plan and design.

The Hinayāna *vihāras* or monasteries found associated with the *chaityas* at the above places, though not of much 'architectural' importance, embody many interesting features. They are facsimiles in rock of the frontage and interiors of structural *vihāras*. Though not of exactly identical designs but presenting various forms and plans, they yet have certain common features which would differentiate them from the later Mahāyāna products in and near the same region. These *vihāras* are in the typical and simpler cases generally astylar halls, with a number of monks' cells excavated into their three side walls, the hall or *maṇḍapa* having one or more main entrances in front.

The earliest perhaps are the four *vihāras* (Caves 8, 12, 13 and 16 A) at Ajanta associated with the more or less contemporary *chaityas*—Caves 9 and 10. Vihāra 12 is an example of a single-storeyed monastery which has lost much of its original façade. A similar single-storeyed *vihāra* is to be found at

EARLIER MONUMENTS

Kondane, attached to the *chaitya* of that place, but here the central hall is pillared; apparently it had a pillared portico in front over which projected a massive cornice with an entablature imitating woodwork. Behind the portico, the central doorway with windows on either side leads through the screen-wall into the hall surrounded by a peripheral colonnade. Cells opening into this hall are dispersed on the three sides. The Pitalkhora *vihāra* also consists of a pillared hall, with a few of the cells extant, and, in contrast to the others with flat roofs, has a ribbed vaulted roof and lattice-windows, all modelled as if it were carpentry.

The three *vihāras* at Nasik (Caves 3, 8 and 15), fashioned, according to the inscriptions, in the times of the Sātavāhana Gautamīputra, the Kshatrapa Nahapāna and the Sātavāhana Śrī-Yajña, are single-storeyed but highly-decorated examples. They have frontal pillared porticos (pl. XXXII), astylar halls and cells provided with rock-cut couches opening into the hall from the three sides. But the three show individual variations in their pillar-forms.

The Bhaja *vihāra* is irregular on plan. It has an outer verandah and an inner hall separated by a wall with two doorways and a barred window. The hall has cells excavated on its two sides. The roof of the verandah is barrel-vaulted with gable-ends.

C. THE ĀNDHRA REGION

On the east coast of the peninsula, at Guntapalli (Krishna District) is a group of two *vihāras* and a *chaitya* excavated into the coarse sandstone hills and forming part of a large *saṅghārāma*-complex of a few structural monasteries, *stūpas* and *chaityas*. The rock-cut *vihāras* and the *chaitya-griha* may be

ROCK-CUT MONUMENTS

assigned to *circa* 200 B.C., not far removed in point of time from the early excavations of Aśoka and his grandson near Gaya (above, p. 110). They may indicate a parallel shift of the venue of rock-architecture from Bihar to the eastern coast of the peninsula, where sandstone was exploited for its greater tractability. The Guntapalli *chaitya* is similar to *vṛitta-chaityas* of Junnar (Tuljā-leṇa) and Kondavite on the western coast of the peninsula but recalls more the inner circular cells and façades on the Lomās-rishi and Sudāmā caves in the Barabar hills. It is a petrified version of a circular hut with a hemispherical roof (*kūṭa*) resting on a basket-like wooden framework and enshrining a monolithic *stūpa* as the object of worship in its centre with a circumambulation all round it inside. The frontal projected porch is a *nāsikā* with the doorway. The ceiling inside shows sixteen curved ribs—the *lūpas* or *gopānasas*—dispersed radially, springing from different points over the wall of the cell and converging to the point at the apex, interconnected at intervals by loops or *valayas* of decreasing diameter from below up, the *valayas* run as if through holes jumped into the thickness of each *lūpa*. The *nāsikā*-entrance shows similar imitation of timberwork.

The lower and better-preserved of the two rock-cut *vihāras* here has a façade fairly recessed from the scarp, leaving a narrow terrace in front below and an overhanging ledge above, fashioned so as to form a narrow verandah in front. The façade has three main doors with usual *nāsikā*-arcade above and flanked by a window on each of the sides. Each of the doors leads into a hall of rectilinear shape but of differing dimensions. The inner walls of these three halls are pierced by one or more openings, which lead into further compartments excavated

EARLIER MONUMENTS

into the core of the rock beyond, with a square annexe on their east, west or north, thus showing a haphazard design. The second *vihāra*, cut at a higher level, was more or less similar but is now hopelessly damaged. The coarse work, narrow entrances, lack of sculpture and other features would indicate their very early age and the fact that they are pioneering examples in this rock-medium.

Originally when the structural *stūpas* containing the relics of or associated with the Master or his venerated followers came to be objects of worship and circumambulation, they were sometimes enclosed in railings with *torāṇa*-entrances, forming hypaethral temples, as it were, and in that restricted sense such *stūpas* were also called *chaityas*. The next step would be to enshrine a *stūpa*-symbol as the object of worship in a *chaitya-griha* of varied plan—apsidal, circular, etc.—as is seen in the structural and excavated temples. The large memorial *stūpas*, of monolithic nature, which are found in the *saṅghārāma*-complex of structural *vihāras*, *chaityas* and *stūpas* at Sankaram (Visakhapatnam District) on the east coast are to be taken as totally carved-out lithic copies of structural *stūpas* that reveal the external aspect of the structural originals, as similar smaller *stūpas* occupying the place of worship inside the *chaitya-grihas* do. The monolithic *stūpas* here include some of the largest known of their kind, and the main one in front of the *vihāra* has a diameter of about 20 m.

D. ORISSA

The sandstone outcrops on the twin hills of the Udayagiri and Khandagiri (Puri District) were, due to their softness and easy workability, chosen for the excavation of a series of caves—Jaina monastic

ROCK-CUT MONUMENTS

retreats—datable from 100 B.C. to the earlier years of the Christian era. Out of about thirtyfive such caves, only about seventeen are of any importance, all of them but one in the Udayagiri. Many of them are natural caverns enlarged and fashioned suitably by artificial cutting. A few others are single cells only or verandahs with cells excavated beyond them. The other excavations consist each of several cells together with a portico with a frontal open courtyard. The largest, which are four in number, are double-storeyed galleries made up of cells with pillared verandahs in front grouped round a common courtyard on its three sides, the fourth being open for access. Thus, no systematic plan seems to exist. The pillars are 'wooden' in style, simple, with square shafts, sometimes with corners bevelled to make the plan an octagon, in many cases with oblong notches on top into which the beam above is shown as sunk to its full depth, with additional brackets sprung from the top of the shaft below the notch. These brackets have fanciful vegetal patterns like the branch of a tree as in Cave 1 (Rāñī-gumphā) or depict figures of humans riding *vyālas* as in Cave 9 (Mañchapurī-gumphā). The entrances to the cells have semi-circular *toraṇas* spanning their lintels and resting on pilasters, with capitals of addorsed animals—thus constituting a real *torāṇa*-frame to the entrance. The spaces between the *torāṇas* are linked by bands of rail- or *vedikā*-motif. Cave 1 in the Udayagiri (pl. XXXIII), perhaps the earliest, is the largest and best preserved. It is two-storeyed, overlooking a courtyard which it surrounds on three sides. It is characterized by a long narrative sculpture-frieze along the walls of the upper storey. Cave 10 (Gaṇeśa-gumphā, so called because of its having two bold figures of elephants) is notable for

EARLIER MONUMENTS

its sculptured frieze which is the most elaborate. Cave 9 in the same hill and Cave 3 (Ananta-gumphā) in the Khandagiri (pl. XXXIV) are noted for their fanciful brackets.

3. THE LATER BUDDHIST CAVES

A. GUJARAT AND CENTRAL INDIA

Before the next phase of activity started, some two centuries later, at Ajanta and its neighbourhood, the venue of rock-architecture shifted perhaps into the peninsula of Gujarat in the west.

There is not among the one hundred and forty caves of the western area a single apsidal *chaitya*. There are numerous cells, 4 to 6 m. in depth, containing *stūpas* inside. They are mostly astylar and devoid of any ornamentation. The *vihāras* are constituted by single cells or small groups of cells with a pillared verandah, but seldom, if ever, surrounding a hall or forming any architectural combination. A few are of the nature of large halls, 15 to 18 m. square but generally without pillars or cells, perhaps indicating that they were assembly-halls or refectories, with the plainest ornamentation if any. The series of caves lower down on the Junagadh hills seem to belong to later periods and the original pattern is complicated by the excavation of later cells. Some of these early caves are of the nature of large halls, with recesses cut into their sides, surmounted by a frieze of *nāsikā*-arches.

Likewise, the group of excavations—many of them fallen in and destroyed—at Bagh (District Dhar) seem to belong to the period between the fourth and fifth centuries A.D. and are of the Hīnayāna persuasion. There is no apsidal *chaitya* in

ROCK-CUT MONUMENTS

the extant remains, all of them being *vihāras* or monasteries. Of these, four are important. They are essentially large pillared halls behind façade-verandahs (pl. XXXV A) with rows of monk-cells excavated into the side-walls, the central one in the hind wall forming the shrine housing *stūpas*. The pillars have bases and capitals with the shafts chamfered into octagons or with sixteen or more sides. The most remarkable features are the framed doorways and windows, exhibiting multiple mouldings on their jambs, sill and lintel, with carved overdoors carrying sculpture-panels of the twin river-goddesses Gaṅgā and Yamunā on the top corners, and the sculptures inside which are not of so late and fully-developed a type as what followed at Ajanta and Ellora.

B. THE DECCAN

(i) *The main features*

The Mahāyāna creed of Buddhism asserts itself in the rock-architecture of the second phase (*circa* A.D. 450-700) in the Deccan, where, after a lapse of about two centuries and a half, more numerous excavations were made into the same trap-cliff surrounding the horseshoe-shaped valley of Ajanta in continuation of the pre-existing excavations and afresh at other places such as on the continuous scarp at Ellora, to mention the most outstanding ones. Out of the total thirty excavations at Ajanta, all except the seven of the earlier phase, viz., two *chaityas* and four *vihāras* (above, pp. 115 and 118) belong to this phase. They were excavated in the time of the Vākāṭakas, a greater number of them between A.D. 450 and 600, the last one perhaps about A. D. 650, though activity, particularly embellishments may

LATER BUDDHIST CAVES

have continued till the eight and ninth centuries, when the Rāshtrakūṭas were in power. Here and elsewhere, while the *chaityas* essentially retained features identical with those of the earlier phase, the timber-imitations are totally in stone, and the Buddha statuary is the most dominant feature. There is a prominent Buddha icon standing out in front of the central *stūpa*, the object of worship in the apse of the *chaitya*. The figure is placed inside a *nāsikā*, projected from the drum and base of the dome of the *stūpa*, which, while recalling similar brick-built votive *stūpas* of peripheral disposition with *nāsikās* on all the four faces in the Nālandā complex, suggests the conception of the *stūpa* itself as a circular shrine with a domical roof or a vaulted entrance-porch projected in front as a *śuka-nāsikā*, the germs of which were to be seen in the Guntapalli rock-cut *chaitya* (above, p. 116).

(ii) Ajanta

The Ajanta *chaitya*, Cave 19, apsidal and more or less of the same dimensions as the *chaitya* of Cave 10 of the earlier phase, has on its façade but a single doorway, instead of the usual three, with an elegant pillared portico in front (pl. XXXVI), opening out into an attractive outer court, with side-shrines cut into its rock-walls. The pillars inside have developed capitals, the *kumbha* or cushion-shaped member being most prominent; the shafts are decorated. The corbel-brackets and the parts above are richly decorated with sculpture, even as the façade is, with figures of Buddha and his attendants or with other panel-sculpture. Cave 26, which is an apsidal *chaitya* again, later in point of time, is also of a similar plan but is too ornate and richly encumbered with sculpture and decoration, which take away

ROCK-CUT MONUMENTS

much of its grace. The elongated drum of the central *stūpa* is carved all round, in addition to the Buddha figure inside the front *nāsikā*-projection. The last *chaitya* pertaining to this phase is the *Viśvakarmā*, Cave 10, at Ellora, the most well-known of the Buddhist excavations there (pl. XXXVII A). It is larger than the Ajanta *chaityas* but is not so lavishly sculptured, though its *stūpa* is more evolved with a conspicuous projecting *nāsikā* containing a large seated Buddha flanked by attendants and flying *vidyādhara*s (pl. XXXVII B). The *chaitya*-entrance lies through a large open court surrounded by a pillared corridor, the pillars surmounted by friezes of carvings. The façade-entrance is overtopped by a *torāṇa* different from the earlier ones : it is a trefoil arch with a central circular opening. There is a balcony in front of it. This arch and the storeyed ones and the associated *āmalakas* over the lateral entrances recall similar motifs which are characteristic of the contemporary and late Brāhmaṇical temples of north India.

The *vihāras* of Ajanta (except those unfinished or destroyed), viz, Caves 1, 2, 3, 5, 14, 23, 24, 28 and 29, combine in them, as at Bagh, the elements of both monastic abodes in the form of plain and smaller monk-cells and larger and more prominent shrine-cells. Thus these 'abodes of stone' or 'hill-abodes', called appropriately *śaila-grihas* in an inscription datable to A.D. 450-525 in Cave 26, would become *vihāra-chaityas* if we are to equate the term *chaitya* as a shrine containing the object of worship. In fact, the inscription in Cave 16 of A.D. 475-500 calls it a *chaitya-mandira*. They are generally single-storeyed excavations, entered through an outer verandah, with a large central hall having a cella enshrining a Buddha or

LATER BUDDHIST CAVES

related form at the rear, often with a transversely rectangular vestibule intervening between the shrine and central hall. This would also mark the next step in the development of the *vihāra-chaitya*, which at places like Bagh enshrined a *stūpa*-form, replaced here by a Buddha sculpture. This would also correspond to the principal axial arrangement in the plans of structural temple-complexes, viz. of *maṇḍapas*, such as the *mukha-maṇḍapa* (verandah) *mahā-maṇḍapa* (central hall), *antarāla* (vestibule) and *garbha-gṛiha* (shrine-cell), as revealed in the temples at Nagarjunakonda, of an earlier date, and anticipating the pattern of structural temples of subsequent times. When the hall is pillared, the arrangement of a central square enclosed by four or more pillars with the other pillars, twelve or more, forming a peripheral series, as is to be seen in the Bagh caves also, it would suggest the *navaraṅga* or *raṅga-maṇḍapa* of the Chālukyan and similar structural temples to come (see chapter VII below). Into the lateral walls of the central hall and sometimes also into its hind walls, on either side of the shrine-face, or vestibule, are cut cubical cells, for the priestly monks, fewer in number than in regular monasteries rock-cut as in the earlier series here and at Bagh, or brick-built elsewhere, suggesting their restriction to those of the higher hierarchy or to those immediately connected with the ritual-worship of the deity in the principal *chaitya* or cella behind. Often there are additional *chaityas* or shrines on either side of the principal one at the rear of the central hall, or on either side of the front porch or verandah. Even the two-storeyed excavations, for instance Cave 6, have essentially the same plan. The sanctum contains a large figure of Buddha, in high relief often cut-out, with more

ROCK-CUT MONUMENTS

relief-sculptures of attendants, Bodhisattvas, etc., in the vestibule or *antarāla*. In Cave 27, the *antarāla* is advanced into the central hall.

(iii) Ellora

The Buddhist excavations at Ellora would fall into three sub-groups, the earliest being Caves 1, 2, 3 and 5 dating round about A.D. 400. Caves 4 and 6 to 10 would belong to the sixth-seventh centuries. Caves 11 and 12 are unique in themselves. Cave 1 in the first series is simple and perhaps an experimental excavation. Caves 2 and 3 are essentially similar to each other in having an outer verandah leading by a door behind into a pillared hall (*maṇḍapa*) with a shrine-chamber beyond. Cave 2 is exceptional in that it has large lateral galleries excavated on either side of the central hall. Cave 3, perhaps earlier of the two, has monk-cells, five on each side, excavated into the lateral walls of the *maṇḍapa* or central hall, with two more on either side of the shrine behind.

Cave 4 is two-storeyed, the ground floor consisting of the hall, antechamber and shrine behind it, with additional cells on the lateral and hind walls of the hall. The ruined upper floor has a circumambulatory round the shrine and two extant cells. Cave 8 has again a large hall with three monk-cells on its north wall. What is more is that the posterior shrine enshrining a large Buddha is fully cut out and provided with a circumambulatory all round, there being an antechamber or a vestibule (*antarāla*) in front. On the north wall of the ambulatory again are monk-cells. Cave 6 has the usual features—verandah, hall, antechamber and shrine in the axial plane but with a lateral hall in addition provided with six monk-cells, suggesting the isolation of the

LATER BUDDHIST CAVES

monastery or priest-cells from the temple proper. Cave 7 has in its hall behind the verandah a central series of four pillars and twelve unfinished cells on its three side-walls. The door-frame of the shrine-chamber is moulded. Cave 9, strictly speaking, is a long hall or *maṇḍapa*. Its hind wall is divided into three bays by four pilasters, the central one containing a seated Buddha in high relief, with attendants carved on the lateral bays.

While Cave 10 is an apsidal *chaitya*, already described (above, p. 126), the seventh-century Caves 11 and 12 (pl. XXXV B), called respectively 'Do-tal' and 'Tin-tal' (two- and three-storeyed), are perhaps the largest of this class of Buddhist excavations, remarkably original in their plan and storeys and containing interesting iconographic sculptures and architectural embellishments. Though both of them are really three-storeyed, the Do-tal is so called because its ground floor remained buried till it was recently exposed.

A similar excavation, now called Anantaśayana-guḍi, at Undavalli (Guntur District) on the south bank of the river Krishna, on the east coast, is also of this class and is cut into the local coarse sandstone hill. It is also of the seventh century and was excavated originally by those who excavated the Bokardan caves farther west near Aurangabad and at least the upper cave in the Akkanna-Madanna group in Vijayawada, on the north bank of the Krishna (below, p. 138).

(iv) Aurangabad

The excavations at Aurangabad include a Hīnayāna *chaitya* already described (p. 117). Of the *vihāras*, which are eight in two groups, all belonging to the seventh century, those numbered 3 and 7 are

ROCK-CUT MONUMENTS

the finest and best preserved. Each of them illustrates a different form of plan. While Cave 3 is of the usual type with pillared hall and cells Cave 7 has its cella occupying the centre of the hall with a perambulatory, suggesting on plan a central square shrine with a *maṇḍapa* all round, as is to be found in some of the Brāhmaṇical caves described later (chapter VII). But the most striking feature of the *vihāra-chaityas* of this place is the bold statuary with figures almost cut in the round and sometimes of massive proportions, though the designs as on the pillars are in moderate relief.

4. THE BRĀHMANICAL AND JAINA CAVE-TEMPLES

By the end of the first half of the first millennium after Christ the followers of the Brāhmaṇical and Jaina creeds had adopted the rock-cut mode of architecture for their temples and shrines. In the course of six centuries till the eleventh, many examples of such rock-cut architecture were created, they being far more numerous in the south than in the north, the majority of them being Brāhmaṇical and only a few Jaina.

A. UDAIGIRI

One of the earliest groups of importance is that on the sandstone hill at Udaigiri (Vidisha District) about 7 km. north-east of Sanchi and not far from the ancient city of Vidiśā, with their beginnings in the first years of the fifth century A.D. in the times of the Guptas — during the reigns of Chandragupta II and his immediate successors. Of the twenty forming the group, half the number are mere rectangular niches of varying dimensions cut into the face of the rock, some having large sculptures or sculpture-groups carved in high relief, such as

the Varāha and Anantaśāyī panels. The others, except one, constitute 'cave-temples', being partial or total excavations, each consisting of a rectangular rock-cut shrine-chamber and a pillared portico in front, the latter in most of the cases structural, the façade having a row of four pillars with greater intercolumniation between the inner two—a characteristic Gupta feature; so also are their square bases, octagonal and ultimately sixteen-sided shafts, carrying the vase-and foliage (*kumbha-vallī*) capitals. The rock-fronts of the shrine-chambers are pierced by door-openings, framed by an elaborate overdoor, well carved and flanked by pilasters corresponding to the pillars of the *maṇḍapa*-façade (pl. XXXVIII A). The laterally-extended parts of the overdoor above the lintel often have panels depicting the river-goddesses Gaṅgā and Yamunā—one at either extreme, while below on either side of the jambs are relief-sculptures of door-keepers (*dvāra-pālas*). Additional sculptures sometimes adorn the wall-spaces beyond the *dvāra-pālas* extending often to the returning walls of rock forming partially the side-walls of the *maṇḍapa*. The interior of the shrine-cell is plain, often with a sculpture of the deity in worship on the hind wall or on a pedestal made for it on the floor. The last cave, the largest excavation and perhaps Jaina in nature as indicated by a later inscription, is different in having its interior partitioned into many chambers by structural rubble-walls. The exception mentioned above is the Tāwa cave, more or less a circular monolithic temple, hewn out of an isolated mass of rock into a hemisphere on a base and surmounted by a large flat stone in the form of a *tāwa* (griddle). The inscription inside it says that it was fashioned by a minister of Chandragupta.

ROCK-CUT MONUMENTS

B. THE DECCAN

(i) *Badami*

The south Indian cave-temples were excavated by the Chālukyas of Vātāpi in the sixth and seventh centuries, their political successors the Rāshtrakūṭas of Mānyakheṭa between the seventh and ninth centuries, by the Pallavas of Kāñchī between the sixth and ninth centuries, and by the Pāṇḍyas of Madurai in the eighth and ninth centuries, as also by contemporary minor and subordinate dynasties of these imperial powers. The major powers were not only political rivals but competitors in the patronage of art, architecture and literature.

The Early Chālukyas chose the finely-grained and horizontally-stratified sandstone cliffs of Badami (Bijapur District), which facilitated excavation of comparatively large cave-temples and the execution of fine sculptures and intricate carvings in them. There are four such cave-temples, three Brāhmaṇical and the fourth Jaina. The earliest of them (Cave 3), dedicated to Viṣṇu, is the largest of the series and was excavated, according to its inscription, in Śaka 500, i.e. A.D. 578, by Maṅgaleśa, a powerful ruler. It was followed in quick succession by the other two, Cave 2, the smallest, also dedicated to Viṣṇu, and Cave 1, of medium size, dedicated to Śiva (pl. XXXIX). The Jaina cave-temple at the very top of the hill is later by about a century from the rest.

These cave-temples essentially consist of a rectangular pillared verandah (*mukha-maṇḍapa*), a more or less square pillared hall (*mahā-maṇḍapa*) and a small almost square shrine-cell (*garbhagṛiha*) at its rear, all in an axial plane and entirely

BRĀHMANICAL AND JAINA CAVES

rock-cut, constituting the flat-roofed *mandapa* type of temples. The façade-opening is wide and sufficiently high. The façade-pillars are tall and massive, often carved and of square section carrying brackets (*potika*) below the beam, the massive overhanging ledge in front forming a sort of eaves or cornice (*kapota*) with a framework imitating wooden cribs below. The beam over the brackets as also the under-frame of the cornice are often strutted up, as it were, by bold caryatid-like supports of human, celestial and animal figures sculptured almost in the round. The ceilings of the verandah are formed into coffers by cross-beams and filled with relief-medallions. The inner pillars, especially the inner row of the verandah, though square at base, are complete with capital-components of circular section, viz. the vase-shaped *kalasa* and the cushion-shaped bulbous *kumbha*, to mention only the most prominent. The pillared hall in the interior shows slight variations in the disposition of the columns, but invariably, as on the façade, intercolumniation between the central pillars is slightly greater than that between the lateral pillars. The inner pillars are polygonal in section.

(ii) *Aihole*

The two cave-temples at Aihole (Bijapur District), viz. the Rāvalaguḍi (*circa* A.D. 700), dedicated to Śiva, and the slightly-later Jaina cave-temple excavated into the low sandstone outcrops, would perhaps mark the latest of the Early Chālukyan series. Though smaller than the Badami cave-temples, these are interesting from the points of view of design and sculpture. The pillars are more slender, and the capitals have all the usual components of the order. The Śaivite excavation consists of

ROCK-CUT MONUMENTS

a hall and a large cella one behind the other, the front one forming the *maṇḍapa* and the rear one the shrine with a rock-cut *liṅga*. There are also two smaller lateral halls excavated on the wings of the *maṇḍapa*, while in the case of the Jaina cave-temple the front verandah is more pronouncedly rectangular.

(iii) Ellora

At Ellora, the high trap-ridge, which had afforded the venue for a series of Buddhist rock-monuments (above, p. 128), now provided scope for Brāhmaṇical and Jaina works. The Brāhmaṇical cave-temples, occupying the central section of the hill and the parts higher up, belong to the period of the Chālukyas and their Rāshtrakūṭa successors, who came to power in this region in the middle of the eighth century.

The Brāhmaṇical excavations (Caves 13 to 29) are mostly Śaivite in character and would fall into two distinct chronological series, the earlier series being more after the models of the preceding Buddhist excavations and characterized by the absence of an image or symbol, like the *liṅga*, in their sanctums. The later series are simpler and more after the models of the south and contain an image in relief, such as Maheśa-mūrti, on the rear wall of their sanctum, a rock-cut *liṅga*-pedestal and sometimes a rock-cut *nandi*.

Cave 21, called the Rāmeśvara (pl. XL), would represent the earliest of this group, and along with those adjacent, viz., Caves 20, 22, 23 and 24, would perhaps belong to the early seventh century. Caves 14, 17, 18, 19, 25, 26, 27 and 29 are perhaps to be dated to the close of the same century. Cave 15 (Daśāvatāra), which is double-storeyed (pl. XLIV), would pertain to the first half of the eighth century

and mark the culmination of the Chālukyan phase. Caves 18 and 27 consist primarily of a hall or *maṇḍapa* with niches on its side-walls and a shrine behind with an intervening antechamber (*ardha-maṇḍapa*). Caves 18 and 22 show an elaboration in that their halls have lateral galleries. In Cave 25 lateral galleries are attached to the antechamber. Caves 14, 17, 20, 21 and 26 have their shrine-chambers behind the *maṇḍapa* cut out on all sides, resulting in a circum-ambulatory. Cave 29 is of interest because its *maṇḍapa* is almost cruciform on plan with projected entrances on the west, north and south, and with a *nandi*-platform in the court in front of the main (western) entrance. The square shrine, with a *liṅga* inside, has openings on all the four sides—*chatur-mukha*, anticipating the plan of the similar Elephanta and Jogeśvari caves. It is the largest and best-preserved of the three but lacks the sculpture of Maheśa-mūrti of Elephanta (below, p. 136).

The pillars in these caves are varied in nature and design and are simple square or octagonal in section, or generally of the *kumbha-vallī* type with full vases and excrescent foliage at the middle height. The corbels of the pillars, where they exist, are either simple or ornate. The cornice or *kapota* over the façades and shrine-fronts is decorated by horseshoe-shaped *kūḍu*-arches which are small *nāsikās*. The door-frames have overdoors and carry on the top over the *kapota* a line of miniature storeyed shrines or *vimānas* of the southern type or replicas of the different types of superstructure found over the northern temples.

The group of smaller caves on the hill, collectively numbered Cave 21 (Gaṇeśa-leṇa), over a score in number, consist each of a *maṇḍapa* and shrine-chamber behind in each case, with simple pillars on

ROCK-CUT MONUMENTS

the façade. The rear shrine-wall has a relief of Maheśa-mūrti, and in most cases there is a *liṅga* inserted into a circular *pīṭha* on the floor and in one instance at least a rock-cut *liṅga* in addition. The pillars and pilasters are square, the corbels of the Chālukyan type, and the shrine-doorways have overdoors. They may perhaps belong to the eighth-ninth centuries.

The Jaina excavations, Caves 30 to 34, which commenced with the ninth century and continued in the next, follow the earlier Brāhmaṇical series in design and decoration, differing only in the nature of their sculptural content. Of these Caves 32 and 33 (pl. XLV), both double-storeyed, are outstanding.

(iv) *Elephanta*

The main cave at Elephanta, a small island off Bombay, is distinguished by the exceptional quality of its sculptures, of which that of Maheśa is well-known. The main axis of the excavation is parallel to the length of the rock. Its plan consists of a large *maṇḍapa* supported by twenty pillars on its periphery, eight each on the longer sides and two between the corner-pillars on each of the shorter ones, which have the flights of steps leading from the courts in front and behind. These courts are formed by cuttings which more or less isolate the section of the rock with the excavation from the rest of the mass. In front of the eastern entrance on the floor of the court is a circular pedestal, perhaps for a *nandi*. On the northern side of the main *maṇḍapa* is cut a porch-like *ardha-maṇḍapa* with two pillars and pilasters on its façade, and behind it a rectangular *mukha-maṇḍapa*, longer than the porch by the addition of one more bay at either end. These two

BRĀHMANICAL AND JAINA CAVES

are in design the northern lateral extensions of the main *mahā-maṇḍapa* with an entrance on the open side. The corresponding lateral extension of the same type on the south into the hill contains the niches of the Maheśa and other sculptures. Towards the distal end of the *mahā-maṇḍapa* is cut a *chatur-mukha* shrine, square in section and with doors on all the four sides framed by simple overdoors. Inside the shrine is a rock-cut *liṅga*-pedestal, with a spout at its north on top, the *liṅga* being a separate insertion. In front of the shrine is formed an inner or *raṅga-maṇḍapa*, between two linear rows of four pillars, and leaving a circumambulatory bay in front of the shrine as on the other three sides. A cutting into the rock, on the east beyond the northern portico, leads to the eastern forecourt and the main entrance to the temple. On the southern side of this court is a smaller cave-temple dedicated to Durgā. A similar cutting at the western end, beyond the northern portico, leads to the court behind the main temple on the western wall of which is cut a smaller Śiva cave-temple consisting of a square shrine and *maṇḍapa* in front.

(v) *Jogeśvarī*

Excavated almost underground into a low trap outcrop in Bombay, this is larger in area than the Elephanta cave, though it is essentially of the same type. The required scarps for the excavation into the central mass was prepared by trenching on three sides. At the eastern and longer end is carved a large *mahā-dvāra* with a central passage and flanking *maṇḍapas* on either side; one of them contains Gaṇeśa. The *mahā-dvāra* leads to an open court and the façade of the *ardha-maṇḍapa* with higher floor-levels. The main part of the temple beyond

ROCK-CUT MONUMENTS

consists of a square *chaturmukha* shrine, surrounded by a pillared cloister, with six pillars on each side, counting the corner ones. This is surrounded again by an outer astylar cloister, with a lower floor-level enclosed by rock-walls on all the sides except for the entrance on the east, west and south. The shrine here occupies a central position and its doorways are framed by elaborated overdoors. On the western side is cut another *ardha-maṇḍapa*, similar to the one on the east, which leads out through a narrow tunnel cut into the rock to the road beyond. On the southern side, the main *maṇḍapa* leads through three openings, with a fine overdoor round the central one, flanked by two intermediate windows, to an extension on this side. It is an outer open *maṇḍapa* which has on its southern façade a row of ten pillars and two pilasters. Outside this is a narrow open court, and the rock-wall beyond has incomplete or abandoned excavations of smaller size, the easternmost of which is dedicated to Śiva and is interesting in having caryatids on its façade-pillars. The original dedication of the main sanctum was to Śiva though it now enshrines a modern idol of a goddess.

C. THE ĀNDHRA REGION

To the early Chālukyan period also belong the upper cave-temple of the Akkanna-Madanna group at Vijayawada (Krishna District) and the double-storeyed cave at Undavalli (Guntur District), which had been originally Buddhist and was perhaps converted into a Brāhmaṇical cave, called Anantaśayana-guḍi. To this group also belongs the cave-temple in the low hill at Bokardhan (Aurangabad District in the Deccan). The palaeography of the identical and characteristic titles inscribed in all the three

BRAHMANICAL AND JAINA CAVES

would indicate their contemporaneity. The series of four cave-temples at Advi-Somanapalle (Karimnagar District), excavated into the sandstone hill, though much crude in point of workmanship, perhaps also belong to the early Chālukyan period.

About a dozen cave-temples on either bank of the Krishna, at Undavalli, Penamaga and Sitaramapuram on the south bank, in Guntur District, and at Vijayawada and Mogalrajapuram on the north bank, all in Krishna District, form a separate series in the Chālukyan territory, dating from about 700. They may be ascribed to the contemporary Eastern Chālukya line which ruled from Veṅgī. Essentially these cave-temples consist of a rock-cut hall or *maṇḍapa* with one or more (often three) shrine-cells behind. The hall is astylar or multi-pillared or divided into front and rear sections by two rows of pillars and pilasters, the usual façade row and a parallel inner row. The pillars are usually thick-set, short and square in section throughout or have their middle height bevelled at the corners to an octagonal section, the basal and apical segments remaining square in section. The cornice of the façade is decorated by small horseshoe-shaped ornament—the *kūḍus*. The doorway of the shrine is simple. It often has two flanking pilasters supporting a *torana*-festoon above. Two of these cave-temples were dedicated to Durgā and the others to Śiva or Viṣṇu. The sculptural content is meagre when compared to the Chālukyan specimens at Badami and Aihole.

In the Bhairavakonda hills at Kottapalle (Nellore District) occur a series of eight cave-temples. Interposed between them, along with two sculptures of dancing Śiva and Hari-Hara, are small niches or

ROCK-CUT MONUMENTS

memorial-shrines containing *liṅgas*, which from their dedicatory or other inscriptions seem to range from the seventh to ninth centuries. The cave-temples would fall into two groups, the first four starting from the northern end forming one and the remaining four constituting the other. The first four are simple shrine-cells cut into the soft schist rock without a *mandapa* in front; they also lack the elaborately decorated *kapota* and *kūḍus*. The second group consists each of an outer *mandapa* with two pillars and two pilasters on the façade and a shrine-cell cut behind. On the top of the façade runs a flexed *kapota* or cornice decorated by *kūḍu*-ornaments of the Māmalla style (below, p. 144). The pillars are square in section and of Chālukyan pattern as in the examples on the banks of the Krishna. In some caves they have lion-caryatids on the top and are lion-based. The corbels are smoothly curved and often decorated by roll-ornament (*taraṅga*), as in Pallava examples. Another similarity would be the squatting lion-bases of the pillars which have the full capital-components of the order as in the Māmalla style (below, p. 144). The shrine-entrances are plain openings like those in Pallava examples and without the characteristic Chālukyan overdoor. But the *dvāra-pālas*, cut in relief on either side of the shrine-entrance, are typically Chālukyan derived through the eastern line. These mixed characters and other features, as also the presence of relief-sculpture of Brahmā and Viṣṇu in the *mandapa*, along with the provision for the installation of a *liṅga* in the shrine and the occurrence of other sculptures like Gaṇeśa, Chaṇḍikeśvara and rock-cut *nandi* on the floor of the open cutting in front, would indicate that these excavations would belong to the eighth and

ninth centuries. The crude simple ones of the first group seem to be later than the more elaborate ones of the second group.

D. THE TAMIL LAND

(i) *The Pallava cave-temples*

I. THE MAHENDRA STYLE.—At about the same time when the Chālukya Maṅgaḷeśa excavated his shrine for Viṣṇu in the soft sandstone cliffs of Badami (above p. 132), his political rival in the Tamil land, Mahendravarman I of the Pallava dynasty (*circa* 580—630), excavated into the hard granite hill at Mandagappattu (South Arcot District) his first cave-temple dedicated to the Brāhmaṇical trinity—Brahmā, Śiva and Viṣṇu. In his inscription there he states that he created the abode for the three gods without employing such conventional materials as brick, timber, metal and mortar, and in doing so he declares himself to be an out of the ordinary type. As such this would be the first temple in stone in the whole of the the southern country. Mahendra's triumph was not only in this but also in the success in tackling the hard and almost intractable granite—a feat which had been not known for nearly a thousand years after Aśoka and his grandson Daśaratha (above, p. 110). The Mandagappattu cave-temple was followed by the excavations at Pallavaram and Vallam (Chingleput District), at Mamandur, Mahendravadi and Siyamangalam (North Arcot District), Dalavanur (South Arcot District) and Thiruchchirappalli. At Mahabalipuram (District Chingleput) the cave-temple to the north of the Koṇeri-maṇḍapam and the one higher up on the same side of the hill called Pulipudar-maṇḍapam are unfinished specimens of Māmalla's time, but

ROCK-CUT MONUMENTS

along with a few others show the beginnings of excavations and are thus instructive about the progress and technique of excavation into hard rock.

Like the Mandagappattu one, those at Pallavaram and Mamandur (second cave), as well as those at Kuranganilmuttam and Vilappakkam (North Arcot District), which, though uninscribed, can be attributed to Mahendra himself, were dedicated to more than one deity. The cave-temples at Vallam, Siyamangalam, Dalavanur and Thiruchchirappalli were dedicated to Śiva, while those at Mahendravadi and perhaps Mamandur (first cave) were dedicated to Viṣṇu.

These cave-temples essentially consist of a rectangular *maṇḍapa* with a row of massive and short pillars and pilasters in the façade, usually four in all. Sometimes the façade is longer with four, six or even eight equally-spaced pillars, which are square in section, with the middle third chamfered into an octagonal section, and carry massive corbels with bevelled or curved ends, sometimes with the faces carved as a series of rolls (*tarāṅga*). A well-formed cornice or *kapota*, with or without *kuḍu*-ornaments, is absent as a rule. The *maṇḍapa* is often divided into proximal and distal sections, the *mukha-maṇḍapa* and *ardha-maṇḍapa*, by an inner longitudinal row of pillars and pilasters corresponding to the façade-row, and of the same type; where there are no inner pillars, the differentiation is indicated by differing floor-levels or ceiling-heights. The shrine-cell or-cells are usually cut into the rear wall of the *maṇḍapa* often into one of the lateral walls. A flight of about three rock-cut steps from the floor of the *maṇḍapa* leads to the simple shrine-entrance. The shrine-doors are generally guarded by pairs of *dvāra-pālas*, while in

BRĀHMANICAL AND JAINA CAVES

the earliest cave-temple, where the shrines for the trinity are but deep niches, the *dvāra-pālas* flank the *maṇḍapa*-façade. The cells are cubical and are empty with plain walls and ceiling, there being no rock-cut *liṅga* or image on the floor, not even a relief on the rear wall.

The cave-temples of the Mahendra style (pl. XXXVIII B) continued to be excavated between 630 and 700 by Mahendra's son and successors, whose products, marking the second phase, are the cave-temples at Tirukkalukkunram, the Koṭikāl-maṇḍapam and the Dharmarāja-maṇḍapam, both at Mahabalipuram, the Narasimha cave-temple at Singapperumalkovil (Chingleput District), the Raṅganātha cave-temple at Singavaram (South Arcot District) and two unfinished cave-temples at Mamandur (Caves 3 and 4). Atiraṇachanda's cave-temple at Saluvankuppam near Mahabalipuram, of the time Rājasimha (700-30), would mark the end of the second phase.

II. THE MĀMALLA STYLE.—Mahendra's worthy son and successor Narasimhavarman I Māmalla (630-68), besides excavating a few Mahendra style cave-temples, initiated a new ornate series of cut-in cave-temples, cut-out shrines (*vimānas*), popularly called *rathas* (pl. XLII), and some open-air bas-relief compositions of considerable size and fine quality, e.g. Arjuna's penance. The cave-temples of this style initiated by him were mostly completed in stages by his immediate successors, who also created a few monuments in the same style, all confined to Mahabalipuram. The most outstanding advance noted in these cave-temples is a fuller representation of the frontal and interior aspects of a contemporary structural *maṇḍapa*. While in the Mahendra style the *maṇḍapa*-façade stops short of

ROCK-CUT MONUMENTS

the *prastara* or entablature represented by the beam and a crude *kapota*, in the Māmalla style it is fully furnished with a flexed *kapota* decorated by *kūḍus* and a string of miniature shrines above it, mostly composed of *śālās* with a rectangular plan and barrel-vaulted roof, constituting the *hāra* with interconnecting lengths of cloisters. The pillars resemble the conventional patterns of their wooden prototypes, having all the capital-components of the order and are taller and more slender than those of the Mahendra style. Their bases are often shaped into squatting lions or leonine *vyālas*. Their *maṇḍapa* is often divided into front and rear halls, the *mukha-maṇḍapa* and *ardha-maṇḍapa*, by an inner row of pillars. The shrine-fronts are often more projected into the *maṇḍapa*, and their entrances are flanked by pilasters with *dvāra-pāla* niches on either side. As in the more developed Mahendra style cave-temples, there is a well-formed *prastara* above the shrine-entrances with flexed *kapota* and *kūḍu*. The shrine-cells are at the rear of the rectangular *maṇḍapas*, one or three or five in number.

These cave-temples also show a marked advance in plastic decorations in the form of bold sculptures of gods and goddesses and large panel-compositions depicting legends. Some of those excavated or completed by Parameśvaravarman (670-700) contain bas-relief panels of Somāskanda (Śiva-Umā and Skanda) on the rear shrine-wall.

The Koneri-maṇḍapam marks the transition from the Mahendra to Māmalla styles in having a façade-row of typical square but taller pillars of the Mahendra style and an inner row of the Māmalla style ones without lion-bases, the latter, circular and with capitals, dividing the *maṇḍapa* into front and rear sections. Over the facade is a well-formed

kapota with *kūḍus*, mounted by the usual *hāra* of miniature shrines. There are five shrines, three with projected fronts and two in the intervening recesses—all empty. The Mahishamardini cave-temple has on its façade a row of circular but fluted pillars with capitals, without lion-or *vyāla*-bases, while the inner *maṇḍapa*, projected in front of the middle of the three shrines, has lion- or *vyāla*-based pillars and pilasters. The central shrine contains a Somāskanda panel on the back wall, while the two flanking shrines are empty. The Varāha-maṇḍapam (pl. XLI) has a façade-row of *vyāla*-based pillars and pilasters and a single shrine-cell inside. The Rāmānuja-maṇḍapam had also a similar row on the façade and three shrine-cells, the central one alone bearing a Somāskanda panel (now demolished). It is also unique in that it had a *dvāra-pāla* at either end of the façade in addition to the usual ones flanking the shrine-front or fronts. The Ādivarāha cave-temple has on its façade-row a set of *vyāla*-pillars and pilasters, while those of the inner row are devoid of such bases. Its single shrine-cell contains a stucco image of Viṣṇu as Varāha. The Pañcha-Pāṇḍava cave-temple, which is unfinished, has a more elaborate façade with the typical pillars, which have in addition rearing lions springing from the abacus of the capital and butting against the *kapota*. It is also unique in that it shows an almost complete attempt to cut out the square central shrine by a surrounding passage forming a circumambulatory.

(ii) *The Pāṇḍya cave-temples*

Farther south, the Pāṇḍya contemporaries of the Pallavas started rock-architecture slightly later, by about the beginning of the eighth century, and

ROCK-CUT MONUMENTS

continued it in the two succeeding centuries till they were overthrown, as were the Pallavas, by the rising Cholas of Thanjavur. Their products are to be found all over in Madurai, Ramanathapuram, Tirunelveli, Kanyakumari, Trivandrum and Quilon Districts and the southern part of Thiruchchirappalli District. They are far more in number than the Pallava examples but are essentially similar to them on plan and in design. In addition they show certain characteristic features of their own, combining features peculiar to the Chālukyan examples, particularly regarding their sculptural content and iconography. A rock-cut *liṅga* in the sanctum and often *nandi* in the *maṇḍapa* of Śiva cave-temples, the sculpture of the main deity in Viṣṇu shrines, as at Tiruttangal (Ramanathapuram District) and Tirupparankunram and Anaimalai (Madurai District), the early representations of Gaṇeśa and *sapta-mātrikās* ('seven mothers') in close association with such cave-temples and other sculptures in the *maṇḍapa* are some of noteworthy features. In some cases, as at Piranmalai (Ramanathapuram District), there is a Śiva-Pārvatī relief on the hind wall of the shrine in place of the corresponding Somāskanda panel in the later series of Pallava examples. In one instance, the Śiva shrine in the Tirupparankunram cave-temple, there is a Somāskanda panel in addition to a rock-cut *liṅga* on the floor of the cell. Like the Mahendra style cave-temples, they lack a well-defined *kapota* over the façade; the pillars are also of the Mahendra pattern, the corbels mostly with a plain bevel at their ends and occasionally with the *tarāṅga*-moulding. The pillars at Kudumiyamali (Thiruchchirappalli District) are unusual in that they have moulded capital-components, such as the *kalaśa* and *kumbha*,

as in the Chālukyan and Māmalla cave-temples. Some of the excavations are only shrine-cells.

The Śiva cave-temple in Malaiyadikurichi (Tirunelveli District), the Narasimha cave-temple at Anaimalai and the Subrahmanya cave-temple at Tirupparankunram have foundation-inscriptions: the one at Malaiyadikurichi is assignable to the second half of the seventh century and is thus perhaps the earliest cave-temple; the other two are dated 770 and 773. The Sittannavasal (Thiruchchirappalli District) cave-temple, famous for its paintings, is an example of a Jaina cave-temple of the Pāṇdyas, as revealed by its inscription of the Pāṇḍya king of the first half of the eighth century, stating that it was renovated and re-embellished. As such the original cave-temple may have been a century or so earlier. These dated caves afford the standard for a comparative study and relative chronology of the other Pāṇḍya specimens.

(iii) *The Muttaraiyar cave-temples*

The Muttaraiyar chieftains, who ruled the region on either bank of the Kaveri between the Pallava and Pāṇḍya kingdoms, owing allegiance to them alternatively, have left a few important cave-temples in the area, as at Tiruvellarai, Narttamalai, Kunnandarkovil, Puvalaikudi and other places, all in Thiruchchirappalli District. These cave-temples are of the type of *maṇḍapas* with simple cells and are much akin to the Pāṇḍya cave-temples in the area.

5. THE CUT-OUT MONOLITHIC TEMPLES

A. THE PALLAVA MONUMENTS

The outstanding contribution to rock-architecture of Pallava Narasimhavarman Māmalla is the

ROCK-CUT MONUMENTS

cut-out monolithic shrines or *vimānas*, popularly called *rathas* (above, p. 143). They are in fact large sculptures of architectural models carved out of entire boulders of the rather intractable granitic gneiss of Mahabalipuram. The germ of the idea lies in the carved-out *stūpas* inside the rock-cut *chaitya*-halls of western India, which was elaborated by the Buddhists in the large *stūpa*-forms at Sankaram (above, p. 121). An early, if imperfect, *vimāna*-form is found in the Tāwa cave of Udaigiri (above, p. 131). The early Pallava examples occur at Mahabalipuram, where the *rathas* are nine in number, to which should be added the Trimūrti cave-temple, a representation of three contiguous shrine-fronts.

As entirely cut-out models, these monoliths show not only the entire external aspect of a *vimāna* with its *ardha-maṇḍapa* but also, to a large extent, the interior aspects. They were all carved out from top to bottom. But, as according to traditional ritual, the installation of the *stūpi* or finial should coincide with the consecration of the temple after its completion, the work on these monoliths started from the member next below, viz. the *śikhara*, and a separately-carved *stūpi* was inserted in position later on, close to the *vimāna* near its base. The carving on such monoliths seems to have continued for at least two generations after Māmalla, i.e. till about 700, when perhaps sculptures of the principal deities in some of the shrines, as the Draupadi-ratha and top storey of the Dharmarāja-ratha, were carved in relief.

Of the five *rathas* at the southern end of Mahabalipuram, four, viz. the Draupadī-, Arjuna-, Bhīma- and Dharmarāja-rathas, are cut out of a sloping whale-back hillock, extending north-south, which

MONOLITHIC TEMPLES

explains their varying heights. Architecturally all the five of the group have their counterparts among the other *rathas* of Mahabalipuram, such as the Gaṇeśa-ratha in the midst of the village, which is carved out of a single boulder on the main hill, and the two Piḍāri-rathas and the Valaiyaṅkuṭṭai-ratha, which are cut out of free-standing boulders on the western side of the same hill.

The Draupadi-ratha illustrates a simple hut-type (*kūṭāgāra*), with the domical roof terminating in a single finial and with only four of the six parts of an *ekatala-vimāna*, the *prastara* and the *grīvā* being eliminated. It is an example of the *kūṭa*-type with a square plan from the base to the *śikhara*. A double-storeyed *vimāna*, square from the base to the *śikhara*, with *grīvā* below the *śikhara* and *prastara* of each storey, carrying a *hāra* or string of miniature shrines—*kūṭas* and *śālās*—is illustrated in the incomplete Valaiyaṅkuṭṭai-ratha. The northern of the two Piḍāri-rathas is also of the same class but with the difference that there is no *hāra* over the second storey—an advanced feature—making it out as the latest of the series, anticipating the later *vimānas* of after 700.

The southern Piḍāri-ratha and the Arjuna-ratha are double-storeyed, square in section from the base upwards and with *hāras* over both the storeys, but with the *grīvā* and *śikhara* octagonal in section. The Dharmarāja-ratha is three-storeyed, square below and with octagonal *grīvā* and *śikhara*, but with all the three storeys functional and intended to contain shrine-chambers, as against the non-functional but symbolic upper storeys in the other and later examples.

The Bhīma and Gaṇeśa-rathas have both oblong *vimānas* of the *koshṭha* or *śālā* type with wagon-top

ROCK-CUT MONUMENTS

roofs, carrying a row of finials along the top ridge, as opposed to the *kūṭa* or convergent *śikhara* with single finial in the others. The Bhīma-ratha is single-storeyed and the Gaṇeśa-ratha double-storeyed.

The apsidal form is represented by the Nakula-Sahadeva-ratha; since in its posterior aspect the form resembles the hind view of a standing elephant, it is called *gaja-prishṭha*.

While the *kūṭas* and *śālās* are found in the *hāras* of all these *rathas*, the *nīḍa* or *pañjara* with an apsidal plan makes its appearance as the third element in the projected porch of the first storey of the Dharmarāja-ratha and again in the front of the first storey of the Nakula-Sahadeva-ratha, thus indicating their comparatively late date. The *hāras* enclose between themselves and the storey inside an ambulatory passage in the Dharmarāja-ratha, where the storeys are functional, unlike the later structures where the upper storeys are only symbolic.

The Arjuna- and Dharmarāja-rathas are noted for the fine sculptures decorating niches on their walls. The Draupadī-ratha contains a Durgā relief in its shrine and the Dharmarāja-ratha a Somāskanda relief inside the third storey. In others, with either complete or incomplete shrines, there is no deity. The absence of any water-outlet, usual in later temples, for leading out the water from the sanctum, is also significant. The few pillars and many pilasters are complete with capitals with *taraṅga*-corbels. *Vyāla*-based pillars or pilasters are found on the *ardha-maṇḍapa* façades of the Arjuna-, Bhīma-, Dharmarāja, Nakula-Sahadeva- and Gaṇeśa-rathas and in unfinished forms in the Piḍāri and Valaiyaṅkuṭṭai-rathas. The Nakula-Sahadeva-ratha has in addition a pair of elephant-based pilasters and the Gaṇeśa-ratha pilasters with a *vyāla*-like form with a beaked

MONOLITHIC TEMPLES

face. *Toraṇas* of the *makara*-type—festoons issuing out of the gaping mouths of *makaras* carried on tops of two-columns—spanning the entrances or enclosing niches on walls are seen in the Draupadi-, Valiyaṅkuṭṭai- and the northern Piḍāri-rathas.

B. THE RĀSHṬRAKŪṬA MONUMENTS

In the Deccan, the Rāshṭrakūṭas soon created, under Kṛishṇa (757-83), the largest monolithic temple, the Kailāsa, at Ellora (pl. XLIII), its name being due to a famous sculpture that it bears—Rāvaṇa shaking the mount Kailāsa. By entrenching vertically into the hill-side on all sides of a central rectangle, about 60 m. long and 30 m. wide, a central mass of rock, about 30 m. high, was isolated to carve the components of a temple-complex, with a *vimāna*, axial *maṇḍapas* including a *nandi-maṇḍapa*, and a peripheral group of shrines for minor deities, in addition to two free-standing pillars in the forecourt. The floor-level of the trench all round formed a circumambulatory with a forecourt in its front, the whole measuring 90 × 60 m. The thick mass left in front of the forecourt is shaped into the front enclosure-wall, with a double-storeyed *gopura*-entrance having a *śālā-śikhara* above and a passage cut through its lower part for access to the forecourt and circumambulatory round the main edifice. The upper storey is connected with the floor of the *nandi-maṇḍapa* by a rock-cut bridge. The latter itself is conceived as a double-storeyed structure, only the upper storey, with the *nandi* being functional. The main structure beyond consists essentially of the *vimāna* containing the sanctum, with an *antarāla* or *ardha-maṇḍapa* and a closed *mahā-maṇḍapa*. The whole axial series is raised over the high ornate plinth with its top supported, as it were,

ROCK-CUT MONUMENTS

over a frieze of boldly-sculptured elephants, lions and mythological animals. The *mahā-maṇḍapa* is cantoned at its two rear corners by double-storeyed *vimānas* of the *kūṭa*-type, and over the three entrances—on the middle of the south, west and north sides—are the superstructures of *śālā-vimānas* simulating *gopura*-entrances. The top of the *maṇḍapa*-roof has a large multi-petalled lotus with a finial in the centre.

Behind the *mahā-maṇḍapa* stands the *vimāna* proper, its moulded base occupying the centres of the plinth, with five sub-shrines over its edge. The sub-shrines on the three cardinal sides are double-storeyed *śālā-vimānas*, while the two at the rear corners are three-storeyed *kūṭa-vimānas*. These five together with the two dummy double-storeyed *kūṭa-vimānas* at the hind corners of the *mahā-maṇḍapa* and the *nandi*-shrine in front, complete the full complement of the *ashṭa-parivāras* or eight sub-shrines.

The main *vimāna* is square and four-storeyed; the lowest storey over the sanctum is projected forward over the roof of the *ardha-maṇḍapa* in the form of a gable-projection with arched front. The topmost storey has four *nandis* placed at the four corners. The *grīvā* and *śikhara* are octagonal; the *stūpi*, now missing, was not a part of the monolith. The scarps formed by the cutting of the rock for the courtyard have later cut-in caves and galleries.

Perhaps of about the same period as the Kailāsa, or slightly earlier, is the *nandi-maṇḍapa* measuring 9.5 m. × 3.3 m., in the forecourt of Cave 15.

A much later Jaina version of the Kailāsa, a monolith on a smaller scale, is the Chhotā-Kailāsa standing in the forecourt of Cave 33. It is a three-storeyed *vimāna*, square on plan throughout, likewise

MONOLITHIC TEMPLES

terminating in an octagonal *grīvā* and *śikhara*. The front wall of the court has a monolithic *gopura* as the Kailāsa, and between it and the *vimāna* is a monolithic column. The *stūpi*, which must have been detached, is not in position.

C. THE PĀṆDYA MONUMENTS

As against the Pallava and Rāshtrakūṭa creations, the solitary contribution of the contemporary Pāṇdyas is the monolithic *vimāna* called Vettuvāṅkovil (pl. XLVI A) at Kalugumalai, (Tirunelveli District), of the eighth or early ninth century. It is cut out of a block on the hill-side produced by entrenching all round, as the Ellora examples, and not by free cutting of standing rocks, as the Pallava ones. The maximum depth of cutting from above is 10·5 m., the length 25 m. and width 13 m. Both the double-storeyed *vimāna*, 8·5 m. square at base, and *ardha-maṇḍapa*, 4 m. broad on its façade, are incomplete, but the finished upper parts reveal a high degree of workmanship and contain some outstanding sculptures. The *grīvā* and *śikhara* are octagonal. The four *nandis* round the base of the *grīvā* indicate the date and dedication of the temple to Śiva as also the sculptures of Dakṣiṇā-mūrti, Viṣṇu, Brahmā and Śiva on the faces of the *grīvā*.

D. MONUMENTS IN NORTH INDIA

In the north also monolithic temples were sometimes cut out. At Dhamnar (District Mandasor), in the compact laterite hills, a monolithic Vaishnavite *vimāna* with a *maṇḍapa* in front (pl. XLVI B), surrounded by seven similar monolithic sub-shrines, was created in the eighth-ninth century. The entrance-pit, approached from the face of the rock

ROCK-CUT MONUMENTS

by a 90-m. long crooked passage, measures 31·5 m. × 20·4 m., with the central *vimāna* 14·6 m. long and 10 m. wide. The *maṇḍapa* has a projected porch in front, covered by a *śālā*-roof, the front end showing the complex of *nāsikās* and coalesced *nāsikās*—the *udgama* of the northern texts. Identical motifs surmount the projected bays on the two lateral sides of the *maṇḍapa*. The four corners are cantoned by square *vimāna*-representations, carrying *śikharas* and surmounting *āmalakas* of the northern type. The roof is stepped up. The main *vimāna* is *tri-ratha*, with a *śikhara* composed of *udgama*-motifs and a large flat *āmalaka* on the top. The sub-shrines have *śikharas* which resemble a series of stepped up *kapotas*, with *udgama*-projection in the centre of each side.

The northernmost example of a cut-out monolithic temple-complex, again of the northern style, is found at Masrur (pl. XLVII) in Kangra District, locally called Thākurvārā, of the ninth century. Here the tallest middle section, 50 m. long and 32 m. wide, of a sandstone outcrop on the crest of the hill has been cut out into a series of temples, unique in the Himalayan region. Unlike the Dhamnar specimen and the Kāilasa and the Vettuvāṅkovil (above pp. 151-53), it is not entrenched in a pit but is boldly carved out of free-standing rock, like the Pallava examples. It is a complex of shrines with the principal shrine at the centre. Almost in a line with this on either side are cut two subsidiary shrines of decreasing sizes, the smaller and more distant one occupying the outer angle. A similar arrangement of these secondary shrines appears to have formed the back of the monument, so that the principal shrine stands amidst eight subsidiary shrines—the *aṣṭa-parivāras*—the entrances of all of them being on one

MONOLITHIC TEMPLES

level. Above the cella of the main shrine and level with the now-lost roof of the *maṇḍapa*, the rock is cut as a flat roof broken only by the main *śikhara* and those which overtop the subsidiary ones. The architectural incongruity that would result in the central *śikhara* much overtopping the rest is obviated by the addition of two lateral *vimānas* of intermediate size at the roof-level, each complete with a cella and a *śikhara*. The entry to the main shrine was through a small portico and a larger *maṇḍapa*, of which little remains now. On either side of the *maṇḍapa* were cut two stair-cases leading to the level of the flat roof, with a shrine superstructure masking the entrances. Flanking the portico were two monolithic shrines, each with a false door—opening, as it were, into the portico.

In front of this complex and in a line with the portico or *mukha-maṇḍapa*, there are on either side two *chaturmukha-vimānas*, with square sanctums and sixteen-sided polygonal *śikharas*, bearing rising *udgama*-patterns on its facets. This unique monument is datable to the ninth century.

Perhaps the latest of the series but nevertheless unique, in that it has been carved out of hard granite and is of rather unusual shape, is the monolithic temple at Colgong (pl. XLVIII) in Bhagalpur District, carved out of a solitary granite-boulder near the summit of a rocky island in the Ganga. It is roughly square on plan, being 3·6 m. × 3·3 m., and stands 6 m. high. Its basement-mouldings are roughly marked at a height of 2·1 m. from the ground-level, over which rises the *vimāna* of the *śālā*-type, without an intervening *prastara* or *grīvā*. The east and west end-walls of the *śikhara* are relieved in the fashion of the Orissan *rathas*. The sanctum-cell is excavated into the south face, its entrance preceded by a

ROCK-CUT MONUMENTS

slightly-projected porch. The temple is not fully finished, only its form being roughly chiselled out.

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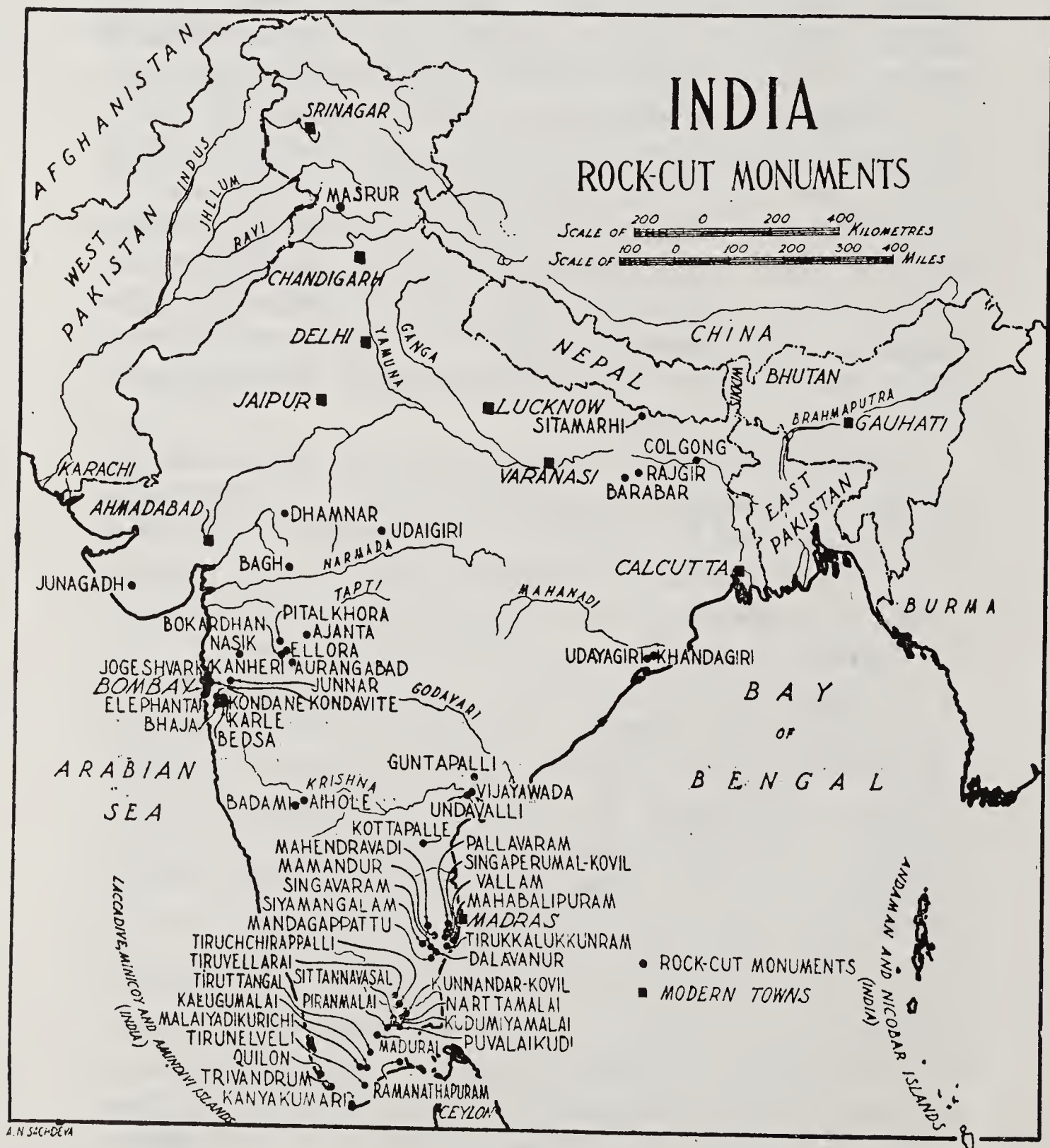


Fig. 3

VI. NORTHERN TEMPLES¹

CONTENTS

	PAGE
1. Early temples of north India	157
2. Early temples in the Deccan in north Indian style	161
3. Early medieval temples of north and central India	163
4. Medieval temples of Rajasthan	169
5. Medieval temples of central India	172
6. Temples of Gujarat	178
7. Temples of Orissa	184
8. Later temples of Bengal	189

1. EARLY TEMPLES OF NORTH INDIA

THE TEMPLE IS THE MOST SIGNIFICANT AND CHARACTERISTIC product of Indian architecture and is reckoned among the oldest institutions of India. Despite its antiquity and the copious literary and traditional references to it, the connected history of the north Indian temple starts from the Gupta age (fourth-sixth centuries), which was marked by an unprecedented intellectual ferment and creative vitality in all spheres of life and thought including art and letters. With some known exceptions temples had

¹For places mentioned in this chapter see map, fig. 4, p. 190. For rock-cut temples, see chapter V.

NORTHERN TEMPLES

hitherto been made of perishable material like timber. The potentiality of dressed stone was for the first time appreciated during the Gupta period, which ushered in an age of temple-construction, characterized by a reasoned application of structural principles. Under the impact of the cult of *bhakti* (worship of the personal god), which had permeated all sections of society, temples sprang up in large numbers for the worship of favourite deities like Vāsudeva, Saṅkarshaṇa-Balarāma, Varāha, Narsimha, Śiva, Skanda and Buddha, of which not many have now survived.

A firm foundation of temple-architecture was laid in this age which witnessed the logical emergence of the basic elements of the Indian temple, generally comprising a square sanctum for housing the deity and a small pillared porch for sheltering the worshipper. The evolved examples of this age also show a covered procession-passage for circumambulation which forms a part of the temple-ritual. The earlier temples are distinguished by a flat slab-roof, usually monolithic, while the later ones develop a rudimentary *śikhara* (spire). But all of them share some common characteristics, such as a modest size, elaborate ornamentation of the door-frame and pillars in contrast to the plain design of the rest of the shrine, division of the door-jambs into *śākhās* (vertical bands) decorated with scrolls, rosettes and other motifs, treatment of the door-lintel as an extended overdoor and the emergence of the pillar into a definite order comprising square, octagonal and sixteen-sided sections with an ornate capital. The evolution of the style is traceable through a progressive development of the plan and of the ornamentation on the pillars and the doorway, the latter introducing decorative motifs like playful *gaṇas* (dwarfs),

EARLY TEMPLES

mithunas (couples), flying *vidyādhara*s (semi-divine beings), door-keepers, and a figure-relief in the middle of the lintel (*lalāṭa-bimba*) representing a significant aspect or associate of the enshrined deity, besides the river-goddesses.

The Gupta temple at Sanchi (pl. XLIX), dating from *circa* fifth century, is the oldest classical example of the style with modest dimensions and restrained decoration. The temples at Tigawa (District Jabalpur) and Eran (District Sagar) have more ornate doorways and pillars, while the Śiva temple at Bhumarā and the Pārvatī temple at Nachna (both in District Panna) add round the sanctum a covered circumambulatory lighted by trellises. The Nachna temple is also notable for its flat-roofed cell as an upper storey above the sanctum. The later Gupta temples, distinguished by a rudimentary *śikhara* over the sanctum, are represented by the Daśāvatāra temple at Deogarh (District Jhansi) and the brick-built temple (pl. L) at Bhitargaon (District Kanpur). The former is a *pañchāyatana* (a temple with four corner-shrines) and the latter a stupendous pyramidal edifice of diminishing tiers extensively embellished with terracotta figures in niches depicting secular and religious themes, gods and demi-gods, human and animal figures and fabulous birds and beasts of wide appeal and homely charm. The platform of the Deogarh temple was decorated with friezes representing scenes from the stories of Rāma and Kṛishṇa, while the three plain walls of its *tri-ratha* sanctum are relieved with superb figure-compositions within the framework of graceful pilasters and architraves, depicting Vishṇu as Śeṣhaśāyi, *Gajendra-moksha* and the penance of Nara and Nārāyaṇa. These are among the noblest specimens of the Gupta plastic art,

NORTHERN TEMPLES

characterized by sensitive modelling, gliding outline, spiritual serenity and aristocratic detachment.

The original brick-built Mahābodhi temple at Bodh-Gaya partially resembles the Bhitargaon one in its essential features of plan and design including the vaulted ceilings of the compartments. But its sanctum carries a lofty (about 55 m. high) *pañcha-ratha śikhara* of a straight-edged pyramidal design, demarcated into seven storeys by *bhūmi-āmalakas* (*āmalakas* occurring at the corners of the *śikhara* to denote storeys).

The most developed among the temples of the group is the brick-built Lakshmaṇa temple at Sirpur (District Raipur). Belonging roughly to the beginning of the seventh century, it consists of a square *pañcha-ratha* sanctum roofed by a slightly curvilinear massive *śikhara*, a constricted vestibule and a pillared *maṇḍapa*, the whole resting on a high platform approached by two lateral flights of steps. Its *śikhara*, divided into four storeys by ponderous *bhūmi-āmalakas*, is embellished with *chaitya*-windows.

Among the aberrant types of temples may be mentioned the flat-roofed stone temple at Mukandwara (District Kota), the octagonal stone temple of Muṇdeśvarī at Ramgarh (District Shahabad), and the circular brick-temple known as Maniyār-Maṭh at Rajgir (District Patna), the last decorated with stucco figures of Brāhmaṇical deities including a *nāgī*, known for its sensitive modelling.

Temple 3 at Nālandā (District Patna) is a unique brick-structure of seven successive phases, of which the fifth one, dating from *circa* sixth century, had a lofty sanctum approached by a grand flight of steps. The façades of its enclosure-wall, with four *stūpa*-like corner-towers, are adorned with niches containing fine Buddhist stucco images.

EARLY TEMPLES

Terraced brick-temples of the Gupta and post-Gupta periods, decorated with terracotta sculptures, are also known. These are solid structures of diminishing tiers with the shrine placed on the uppermost tier, which is approached by a flight of steps. An early representative specimen is the excavated temple at Pawaya (District Gwalior), showing three terraces, of which the upper two are decorated with a row of ornate pilasters surmounted by a frieze of *chaitya*-arches.

The post-Gupta period appears to have been an age of experimentation in north India. During the seventh-eighth centuries various temple-forms were tried, and we find a fair number with a flat roof, some with a straight pyramidal spire, a few with a roof of receding horizontal tiers and still others with an undeveloped curvilinear *śikhara*. Small flat-roofed shrines comprising a square *tri-ratha* sanctum and an unpretentious portico with two pillars, albeit more ornate than in the earlier ones, are found in a considerable number in central India, continuing the Gupta traditions.

2. EARLY TEMPLES IN THE DECCAN IN NORTH INDIAN STYLE

While these temples were being built in central and north India, a brisk building-activity in stone was being pursued in a part of the Deccan with principal centres at the early Chālukyan sites of Aihole, Badami, Mahakuteshwar and Patadkal (all in District Bijapur) and Alampur (District Mahbubnagar). The movement lasted from the sixth to the eighth century and produced significant temple-forms which had a considerable impact on the development of the early northern and southern temple-styles. The

NORTHERN TEMPLES

Lād-Khān temple at Aihole is the earliest in the region and, though essentially Guptan on plan, is notable for its cloistered interior showing pillars with ponderous bracket-capitals, timber-like construction of walls with screens attached to posts and treatment of roof-slabs on the principle of tiles. Four other temples of Aihole dating from sixth-seventh centuries are of importance for the development of the northern style. The Durgā temple is a peripteral structure with an apsidal sanctum, surmounted by a *tri-ratha* northern *śikhara*, a pillared *mandapa* with a flat roof of two tiers, enclosed by a pillared verandah, and a portico approached by two lateral flights of steps, the whole raised on a platform. The Huchchimalli-guḍi temple consists of a square sanctum with a *tri-ratha* northern *śikhara*, a vestibule marking its earliest occurrence, a pillared hall and a porch. The Huchchappayya-guḍi temple is a *nirandhāra* (one without ambulatory around the shrine) version of the foregoing, while Temple 24 is the only one of the northern style at Aihole to preserve its *śikhara* complete with its crowning elements.

The Saṅgameśvara temple at Mahakuteshwar is simpler and comprises a sanctum and portico, the former displaying a sculptured niche in each *bhadra* (central projection) and carrying a stumpy *tri-ratha śikhara*.

The temples at Aihole, Patadkal and Mahakuteshwar are dealt with in detail in chapter VII.

Among the northern style temples at Patadkal, those of the Kaḍa-Siddheśvara and Jambūliṅga are the simplest, comprising only a sanctum and *mandapa*, the former roofed by a squat *tri-ratha śikhara*. The Kāśī-Viśvanātha temple is similar on plan but has a *pañcha-ratha śikhara*. The Galaganātha is a *sāndhāra* (one with ambulatory around the shrine)

TEMPLES IN THE DECCAN

temple with a conspicuous projection on the three sides of the sanctum-ambulatory and is roofed by a *tri-ratha śikhara* of taller proportions, anticipating the Alampur temples in these respects. The temple of Pāpanātha is a long low structure, comprising a portico, *maṇḍapa*, vestibule and sanctum, the last surmounted by a stunted northern *śikhara* which is too small in proportion to the length of the structure, while the vestibule is disproportionately large.

More important than these is the group of temples at Alampur, which has nine temples of the northern order belonging to *circa* eighth century. These are *sāndhāra* temples (pl. LI), each comprising a sanctum with a well-proportioned *tri-ratha śikhara*, vestibule, a pillared *maṇḍapa* carrying a flat roof of two tiers and a portico. The sanctum-ambulatory shows projecting niche-shrines on the three sides, while the *jaṅghā* (wall-portion) is decorated with sculptured niches and latticed windows of a more lyrical design than on the Pāpanātha. Like the early medieval temples of north India, their *maṇḍapa*-pillars carry ornate brackets usually embellished with palmette-like foliage, while their doorways are of the overdoor design and the *lalāṭa-bimba* depicts Garuḍa holding the tail-ends of adoring *nāgas* who form a canopy over the heads of Gaṅgā and Yamunā appearing on the jambs. Thus, in respect of plan and design and many typical architectural and decorative motifs the Alampur temples resemble the early medieval temples of north India.

3. EARLY MEDIEVAL TEMPLES OF NORTH AND CENTRAL INDIA

By the close of the eighth century the common denominator of the north Indian temple comprised a

NORTHERN TEMPLES

cruciform plan, continuation of the main lineaments of the plan on the elevation and a curvilinear *śikhara*, the last being the most striking feature and a cognizance of the northern style. Temples with these characteristics were built in hundreds throughout north India showing regional variations which became established by the ninth-tenth centuries and attained full development during the eleventh. From the ninth century onwards the evolution of the northern temple had largely a regional pattern which was often moulded by powerful dynasties.

The temples of north India, including the Himalayan regions, of the Pratīhāra age (*circa* 700-900) are characterized by a low basement, a simple stunted *śikhara* and a *jaṅghā* decorated with a single band of sculptures crowned by tall pediments of *chaitya*-arches. The temples of central India of the same period have an unpretentious plan comprising in the beginning only the sanctum and a vestibule-like projection, sometimes preceded by an entrance-porch.

The groups of temples at Naresar (District Gwalior) and Batesara (District Morena), forming the earliest examples of the central Indian style and assignable to the early eighth century, show a square sanctum crowned by a small *tri-ratha śikhara* and a vestibule-like projection with a simple gabled roof. Their doorway is of the overdoor-design usually with three *śākhās* including a *nāga-śākhā*, and the *jaṅghā* is plain but for sculptured niches on the central projections depicting deities like Gaṇeśa, Kārttikeya, Lakulīśa, Sūrya and Pārvatī.

The temple at Jagatsukh (District Kulu) differs from the foregoing only in adding a porch resting on two pillars (pl. LII).

The Śiva temples at Amrol (District Gwalior) and Mahua (District Shivpuri) have the same plan

MEDIEVAL TEMPLES

as the Naresar ones but are slightly more ornate. They are followed by a small shrine at Terahi (District Shivpuri), which shows a more developed plan comprising a *pañcha-ratha* sanctum, preceded by a porch that is supported on two pillars. The corner projections of the *jaṅghā* show the eight *dik-pālas* (guardians of the quarters), which henceforth appear on almost all temples. Slightly later in date is the Teli-kā-Mandir at Gwalior (pl. LIII) which, though exceptional in design and composition, is the grandest temple of the contemporary style, perhaps built by a powerful Pratihāra king named Mihira-Bhoja (*circa* 836-88). It has an oblong sanctum, surmounted by a lofty (28 m. high) wagon-vault roof, and is entered through an elaborate doorway of five *śākhās* which are carved in the lower parts with elegant figures or river-goddesses flanked by attendants and Śaiva door-keepers, indicating the Śaiva dedication of the temple. The façades show restrained decorations, which include a recessed band of carvings representing gods, goddesses and *dik-pālas* surmounted by rich scrolls on the upper part of the basement. The principal projections of the *jaṅghā* display elaborate niche-shrines, while the minor projections show niches surmounted by a *śikhara*-design or a pediment of *chaitya*-arches.

The Nava-Durgā temple at Jageshwar (District Almora) shares the oblong lay-out of the sanctum and the roof-design with the Teli-kā-Mandir but is a much smaller and less sophisticated specimen and is earlier in date. Incidentally, this temple-type had a fairly-wide distribution in time and was in vogue in the Himalayan hills as well as in the plains of north India.

The aforesaid temples are followed by the Jarai-Maṭh at Barwasagar (District Jhansi) and Gaḍarmal

NORTHERN TEMPLES

temple at Badoh (District Vidisha). Both have an oblong pillared sanctum, roofed by a now-mutilated *pañcha-ratha śikhara*. The Gaḍarmal temple adds to the sanctum and vestibule a *maṇḍapa* with transepts and a porch, enclosed by a high balustrade punctuated with projecting elephant-heads. Surrounded by seven subsidiary shrines, this temple stands on a large platform carved with elegant sculptures.

The small but well-proportioned Sūrya temples at Mankheda and Umri in District Tikamgarh, each comprising a sanctum with *pañcha-ratha śikhara* and a porch, are gems of the contemporary style, distinguished by fine sculptures, particularly of the Sun-god. Almost coeval with these is the Chaturmukha-Mahādeva temple at Nachna (District Panna), which has a *pañcha-ratha śikhara* of a broad and uncouth outline decorated with an advanced mesh of *chaitya*-arches. While the windows and doorways of the temple are of the overdoor-design carved with *gaṇas*, scrolls and river-goddesses in the typical Gupta tradition, its basement-mouldings and decorative motifs are of the developed style, indicating a ninth-century date.

The Mālādevī temple at Gyaraspur (District Vidisha) is the most ornate and mature example of the style assignable to the close of the ninth century. Partly structural and partly rock-cut, it consists of an entrance-porch, a *maṇḍapa*, a vestibule and a sanctum with an ambulatory roofed by a *pañcha-ratha śikhara* with a cluster of eight minor *śikharas*. The doorways show the five usual bands, that of the sanctum being carved on the lintel with a row of standing *Jinas* and of the *maṇḍapa* with a figure of *yakshī* Chakreśvarī as the *lalāṭa-bimba*, indicating the Jaina dedication of the temple.

EARLY MEDIEVAL TEMPLES

The above temples are the most representative specimens of the early medieval style of north India in general and of central India in particular. All of them have a simple plan and display the characteristic ornaments of the style including tall pediments of *chaitya*-arches and garland-frieze on the *jaṅghā*, a *nāga-śākhā* on the doorway and luxuriously-carved motifs of pot-and-foliage, scrolls, *kīrttimukhas* and a square ribbed cushion-capital on the pillars.

The early medieval temples of Rajasthan have a slightly more elaborate plan and display greater ornamentation particularly on the pillars and the ceilings.

The earliest phase is represented by the Harshat-mātā temple at Abaneri (District Jaipur), a much-ruined terraced temple comprising a *pañcha-ratha* sanctum with ambulatory, a pillared *maṇḍapa* and a porch, decorated with fine sculptures representing both religious and romantic secular themes of dance, music, garden-sport and love, depicted with a remarkably rich luxuriousness and a sense of abandon and delight.

The temples at Osian (District Jodhpur) belong to two series, one earlier, assignable to the eighth century, and the other later, attributable to the tenth-eleventh centuries. The earlier series is represented by nearly a dozen and the later by half-a-dozen specimens. The earlier temples (pl. LIV) are characterized by certain peculiarities. They stand on a high moulded platform, punctuated with sculptured niches, and consist on plan of a sanctum, an open pillared *maṇḍapa* and a porch. At least three are of the *pañchāyatana* type with subsidiary shrines in the four corners. They are normally *pañcha-ratha* on plan and in elevation, showing sculptured niches crowned by pediments of *chaitya*-arches on all

NORTHERN TEMPLES

the five projections of the *jaṅghā* with the *dik-pālas* on the corner-projections. A broad recess usually decorated with a frieze of scenes of Kṛishṇa-līlā separates the *jaṅghā* from the *pañcha-ratha śikhara*. The doorways are of four or five *śākhās*, one of them being a *nāga-śākhā*. The pillars and ceilings are highly decorated with bold designs, the former surmounted by double *tarāṅga* or palmette-brackets. The sculptures are characterized by voluminous modelling and a simple and limited pantheon including Gaṇeśa, Kubera, Sūrya, Chandra, Revanta, Śiva, Pārvatī, Brahmā, Trivikrama, Varāha, Narasimha and Hari-Hara.

The Osian temples are followed by the Kālikā-mātā temple at Chitorgarh, datable to the early ninth-century. Originally dedicated to the Sun-god, it consists of a *pañcha-ratha* sanctum with ambulatory having three transepts, a vestibule, a pillared *maṇḍapa* with lateral transepts and a porch. The design of the doorway and pillars, like the decorative ornaments and sculptures, bear close affinity to the Osian group. The Kumbha-Śyāma temple at the same site is similar to the foregoing but is slightly later and more developed.

The Ghaṭeśvara temple (pl. LV) at Barolli (District Udaipur) assignable to the close of the ninth century, consists of a *pañcha-ratha* sanctum with an elegantly-proportioned *pañcha-ratha śikhara*, a vestibule and a *maṇḍapa* with a pyramidal roof of horizontal tiers, flanked by four miniature *tri-ratha śikharas*. The *jaṅghā* is plain and shows sculptured niches on the central projections containing images of Andhakāntaka, Naṭarāja and Chāmuṇḍā. The *maṇḍapa* is entered through a simple *makara-toraṇa* (arch emanating from crocodiles) and is an open oblong compartment, supported on four

EARLY MEDIEVAL TEMPLES

massive pillars, carved with figures of nymphs which resemble those from Khajuraho in verve and posture.

4. MEDIEVAL TEMPLES OF RAJASTHAN

It is in the medieval period that the plan and design of the temples attain a full development and show definite regional traits. In this period sculpture becomes architectonic and inseparable from architecture, though its quality generally tends to deteriorate. The medieval temples of Rajasthan are marked by an elaboration of plan and design over the earlier temples and a profuse wealth of decorative and plastic ornaments.

The Ambikā-mātā temple at Jagat (District Udaipur), assignable to the early tenth century, comprises a sanctum with a well-proportioned *pañcha-ratha śikhara*, a vestibule, a *maṇḍapa* with latticed windows in the lateral transepts and a porch, partly enclosed by a *kakshāsana*-balustrade. All the five projections of its *jaṅghā* as well as the intervening recesses are profusely ornamented with sculptures, often in two rows, which include figures of charming nymphs, elephant-riders and rampant *vyālas* (lion-like mythical beasts), besides deities including the *dik-pālas* at their appropriate places. The *śikhara* of the sanctum, clustered by sixteen miniature *śikharas*, shows a developed form and ornamentation. The roof of the *maṇḍapa* is a flat pyramid of diminishing horizontal tiers, while its ceiling shows the beginning of a coffered cusp with a pendant, which became a characteristic of the medieval temple.

The dilapidated Sun temple at Varman (District Sirohi) is practically similar to the foregoing but with the difference that it adds an ambulatory to the sanctum. Its doorway is of the overdoor-design

NORTHERN TEMPLES

centrally displaying on the lintel an image of Sūrya which is repeated on each of the three *bhadra*-niches (niches on the projections) of the sanctum. The ceilings are either flat or coffered and are carved with floral decorations or scenes of dance and music.

The Lakuliśa temple at Ekalingaji (District Udaipur), dated 977, is a plainer structure, resembling on plan the Jagat temple. This is one of the earliest temples to show an octagonal *maṇḍapa*, with the figure of a goddess projecting from each angle of the octagonal ceiling.

The Mahāvira temple at Ghanerao (District Pali) is almost coeval with the foregoing and adds round the sanctum an ambulatory with three transepts and in front of the octagonal *maṇḍapa* a porch with three bays (*trika-maṇḍapa*), characteristic of the medieval Jaina temples of Rajasthan.

The twin Vaishṇava temples called the Sās-bahū at Nagda (District Udaipur), assignable to the early eleventh century, are more evolved, displaying profuse ornamentation. They are entered through a detached *makara-toraṇa* and have the usual plan, comprising a *pañcha-ratha* sanctum, a vestibule, a *maṇḍapa* with lateral transepts and a porch. The *jaṅghā* is plain but for two rows of seated images on the central projections, representing the Brāhmaṇical trinity and Rāma, Balarāma and Paraśurāma. The transepts of the *maṇḍapa*, the exterior as well as the interior of the porch, the pillars, ceilings, architraves and the doorways, however, are lavishly carved with relief-sculptures and decorative designs. The larger temple also shows inside the *maṇḍapa* four *makara-toraṇas*, which generally characterize the medieval temples of western India.

Most representative of the eleventh-century Rajasthan architecture are the temples at Kiradu

MEDIEVAL TEMPLES OF RAJASTHAN

(District Barmer). These have the usual components, but each part is accentuated and ornamented in the typical developed style of Rajasthan. The lowest mouldings of the basement include friezes of elephants, horses and humans known as *gaja*-, *aśva*- and *nara-tharas*. All the projections of the *jaṅghā* are carved with figures and the *maṇḍapa* is a sizable octagonal hall with pillars with profuse ornaments. Lastly, the *śikhara* is clustered by numerous miniature *śikharas*, which became a common characteristic of the western and central Indian architecture.

Since the middle of the eleventh century, when the Abu region of Rajasthan came under the political and cultural sway of the Chaulukyas or Solankis of Gujarat, the influence of the Solanki style infiltrated Rajasthan, as illustrated by the group of Jaina temples at Kumbhariaji (District Banaskantha). Gradually the Rajasthan style lost its individuality and practically merged into the Solanki style, as is seen in the Dilwārā group of marble Jaina temples at Mount Abu, of which the most important are the Vimala-Vasahī and Lūṇa-Vasahī, built respectively in 1031 and 1230. Each consists of a sanctum, a *maṇḍapa* with lateral transepts and a porch of nine compartments (*nava-chaukī*) with a *sabhā-maṇḍapa* (spacious open hall) in front, the whole placed in a quadrangular court, surrounded by an enclosure of shrine-cells preceded by two bays of colonnaded corridors. The external appearance of the temples with low roofs and plain enclosure-walls is unimpressive and is in sharp contrast to the exuberant decoration of the interior. Specially noteworthy is their *sabhā-maṇḍapa*, an octagonal hall resting on eight exquisitely ornamented pillars with attic sections carrying multi-cusped *torāṇa*-arches

NORTHERN TEMPLES

in between. Their ornate architraves support a circular ceiling of ten diminishing rings, all of which are loaded with a bewildering wealth of carvings including sixteen life-size figures of the *vidyā-devīs* and a magnificently-designed central pendant. With their minutely-carved doorways, pillars, architraves and ceilings, these temples constitute marvels of stone-chiselling; their over-ornamented interior, however, leaves the visitor with a fatigued mind which looks in vain for respite and poise—the two essential qualities of good architecture.

Building-activity in the Solankī style continued in Rajasthan till the fifteenth century. Two noteworthy examples of the later phase of the style are the nine-storeyed Kirtti-stambha (Tower of Fame) at Chitor, built by Rāṇā Kumbha between 1440 and 1448, and the Jaina Chaumukhā temple at Ranakpur (District Pali), dated 1438, the former unique for the loftiness of its design and the latter for the grandness of its dimensions.

5. MEDIEVAL TEMPLES OF CENTRAL INDIA

In central India the principal medieval dynasties like the Kalachuris, Chandellas, Kachchhapaḡhātas and Paramāras, holding sway respectively over the eastern, central, northern and western parts of central India, built temples which have many common elements of plan, design and decorative scheme with unmistakable divergences due to dynastic or regional factors.

The earlier temples of the Kalachuris are represented by the Śiva temples at Nohta (District Damoh) and Chandrehi (District Sidhi) and the group of temples at Amarkantak (District Shahdol), all assignable to the tenth century. On plan they

MEDIEVAL TEMPLES OF CENTRAL INDIA

comprise a sanctum, vestibule and *maṇḍapa*, partly enclosed by an ornate balustrade. The Nohta one however, adds an entrance-porch and also displays two rows of sculptures on the walls of the *pañcha-ratha* sanctum which is roofed by a stunted *śikhara* of ugly outline. The Chandrehi temple is notable for the circular plan of its sanctum comprising sixteen *bhadras* (projections). The Amarkantak temples are devoid of ornaments and generally comprise of a *pañcha-ratha* sanctum, a vestibule and a pillared *maṇḍapa* with a *kakshāsana*-balustrade. The Karna temple at this site is a triple-shrined structure comprising three *sapta-ratha* sanctums with a common *maṇḍapa*, which is now lost. The Chausaṭh-Yoginī temple at Bheraghat (District Jabalpur) is a hypaethral circular temple with eighty-one peripheral chapels enshrining images of the sixtyfour *yoginīs* and allied deities, with the principal shrine dedicated to Umā-Maheśvara situated in the open court. The most developed temple of the group is the Virāṭeśvara temple at Sohagpur (District Shahdol), attributable to the eleventh century. It bears partial resemblance to the fully-developed Khajuraho temples (p. 177) in displaying three bands of sculptures on the sanctum-façade and in the composition of the *śikhara*, though the general effect is dissimilar due to difference of proportions and a divergent form of *maṇḍapa*.

The temples of the Kachchhapaghātas, confined to the north-western parts of central India, are distinguished by a low plinth, a double register of sculptures on the *jaṅghā*, low pillars decorated with pot-and-foilage motif, a doorway of five bands, of which one is carved with a stylized *nāga-śākhā* and another with a pilaster-design with spiral decorative bands, and a frieze of square rafter-ends embellished with

NORTHERN TEMPLES

monkey-heads below the *śikhara* of a medium height. The earlier phase of the style is represented by the temples at Surwaya (District Shivpuri), dating from the tenth century, and its middle phase by the Kakanmadh temple at Suhania (District Morena), built by Kachchhapaghāta Kīrttirāja (1015-35). Standing on a lofty platform and surrounded by subsidiary shrines, the Suhania temple is notable for its size and sculptural wealth and comprises a sanctum with an ambulatory, roofed by a tall *śikhara* (31 m. high), a grand hypostyle *maṇḍapa* and a porch approached by a flight of steps. Kadwaha (District Guna) was a prolific centre of the school with remains of over two dozen temples. The latest and the largest temple at the site known as the Murāyat, dating from *circa* 1075, is notable for its simple lay-out comprising a *pañcha-ratha* sanctum, a vestibule and a *maṇḍapa* with a highly-ornamented treatment of the interior as well as the exterior. The twin Vaishnava temples known as the Sās-bahū at Gwalior, the main seat of the Kachchhapaghātas, marks the climax of the dynastic style. The larger of the two, completed in 1093, comprises a sanctum, a vestibule and a *maṇḍapa* with three entrance-porches and shows a two-storeyed elevation for the vestibule and the entrance-porches and a three-storeyed elevation for the *maṇḍapa* which has a lofty roof. The *śikhara* over the sanctum, which must have been over 31 m. high, is lost. The *maṇḍapa* is a large hall of twelve sides with a circular ceiling supported on four massive pillars and twelve pilasters. Displaying extravagance of ornamentation, both plastic and decorative, the temple is notable for its impressive design and dimensions.

The Paramāras of Malwa patronized a style which, with its focal point in Malwa, had a wide

MEDIEVAL TEMPLES OF CENTRAL INDIA

distribution over the contiguous regions all around, including north Deccan. The outstanding feature of the style is the *śikhara* which shows four spines with the usual decoration of *chaitya*-arches on the central projections and a distinctive grouping of miniature *śikharas* in the interspaces of the spines in the four quadrants, the number of minor *śikharas* ranging from three to five rows horizontally and five to nine rows vertically. Another peculiarity of these temples is a prominent sculptured medallion within a large *chaitya*-window at the base of the spine on the three sides. The temples comprise on plan a sanctum without ambulatory and a *maṇḍapa* approached by three entrance-porches. The *maṇḍapa* has a peculiar roof called *saṁvaraṇā* (a distinctive geometrical arrangement of rooflets), which is shared by the Solankī temples of western India. Among the Paramāra monuments of central India, notable are the group of temples at Un (District West Nimar) and the Udayeśvara temple at Udaypur (District Vidisha). The latter temple, built by the Paramāra king Udayāditya between 1059 and 1080, is the most finished example of the style, remarkable alike for its ambitious size, good proportions and sculptural ornamentation. Its sanctum is both stellate and circular on plan. The temple has other usual compartments to which are added a low flat-roofed *sabhā-maṇḍapa* in front and seven subsidiary shrines around. The Siddheśvara temple at Nemawar (District Dewas) is the loftiest temple of the style, exhibiting as many as nine vertical rows of miniature *śikharas* studded round the stem of the main *śikhara*.

As stated above, this style had wide ramifications and was as popular in Rajasthan as in the north Deccan. It is but natural that each outlying

NORTHERN TEMPLES

region should also exhibit some regional traits. The outstanding specimens of this style in Rajasthan include, besides temples at Chitor, the Mahānāl temple at Menal (District Chitor), the Śiva temple at Ramgarh (District Kota) and also the so-called Sun temple at Jhalrapatan (District Jhalawar). The last temple shows a complicated *śikhara*-design and introduces multi-cusped *toranas* at the entrance-porches and two bands of sculptures on the sanctum-*jaṅghā*, which are features of Rajasthan grafted on the Paramāra style. In the north Deccan the prominent examples of the style are the Ambarānātha temple at Ambarnath (District Thana) and the temples at Balsane (District Dhulia), besides the Goṇḍeśvara temple at Sinnar and the Mañkeśvara temple at Jhodga (both in District Nasik).

The Chandellas, who were the greatest central Indian power during the tenth-eleventh centuries, were known as great builders. They decorated their realm with tanks, forts, palaces and temples and lavished particular attention on one of their capital-towns Khajuraho (District Chhatarpur), which is notable for possessing one of the most distinctive groups of temples. Except for the Chausaṭh-Yoginī, Brahmā, Lālguān-Mahādeva, Varāha and Mātangeśvara, all the temples of Khajuraho pertain to the typical Chandella style and share certain peculiarities of plan and elevation (pl. LVI). They are compact and well-knit structures, some combining all the developed constituents of the temple-plan, comprising an entrance-porch, a *mandapa*, a *mahā-mandapa* with lateral transepts, a vestibule and a sanctum enclosed by an ambulatory with lateral and rear transepts. Erected on a lofty platform-terrace, the temples have an emphatically-high basement storey consisting of a series of ornamental

MEDIEVAL TEMPLES OF CENTRAL INDIA

mouldings which picturesquely grip the platform-terrace. Over this stable and ornate base rests the *jaṅghā* which consists of solid walls alternating with the voids of the inner compartments. The balconied windows canopied by overhanging eaves provide ventilation to the interior and form beautiful openings for the inner compartments. The solid wall-spaces between them are studded with two or three horizontal bands of statuary of exquisite grace which constitute a striking feature of these temples. The deep shadows cast over the whole composition by the beautiful balconied windows and the light and shade falling over the sculptural bands following the alternate projections and recesses of the indented plan indeed produce a highly pictorial effect. Above the central zone of the *jaṅghā* rise the individual roofs over the several compartments in a modulated crescendo, from the lowest over the entrance-porch to the loftiest over the sanctum.

The developed Khajuraho temples are characterized by an intricate arrangement of subsidiary *śikharas* of diminishing sizes attached to the main *śikhara* at graded heights. The clustering together of subsidiary peaks to the main peak and the progressive ascent of the roofs converging to the highest pinnacle lend a peculiar vertical quality and rhythm to the temples. Their porch is entered through a highly-ornate *makara-toraṇa*, and the interior too displays an amazing exuberance of decorative details and sculptural wealth, largely found on the doorway, pillars, architraves and ceilings. Particularly remarkable are the female bracket-figures of the interior, which, with their sensuous modelling, charming postures and exquisite finish, constitute masterpieces of medieval sculpture. The plastic art

NORTHERN TEMPLES

of Khajuraho revels in admiring the charms of the human body from the most fascinating angles and excels the contemporary schools of Indian art in the vivid portrayal of human moods and fancies which are competently expressed through the medium of gestures and flexions with a frankly sensuous provocation.

The developed Khajuraho style begins with the Lakshmaṇa temple (*circa* 950), which was followed by the Pārśvanātha, Viśvanātha (*circa* 1002), Jagadambī and Chitrāgupta, marking the successive stages in the architectural or sculptural efflorescence at Khajuraho. The peak is reached in the Kandariyā-Mahādeva (*circa* 1025-50) which represents the grand finale of the architectural and sculptural movement. The temples that followed, viz. the Vāmana, Ādinātha, Javāri and Chaturbhuja, are less ambitious projects, though they generally keep up the sculptural excellence of the style. The last surviving temple, the Dūlādeo (*circa* twelfth century), marks the last glow of the dying lamp, combining as it does dynamism and vigour with over-ornamentation. With their *sapta-ratha* sanctum, vertical accentuation of each constituent of the elevation, rhythmic concordance of the lineaments of the plan and elevation converging to the final unity of the *śikhara* and plastic exuberance, combined with a harmonious integration of sculpture with architecture, the Khajuraho temples indeed mark the highest development of the north Indian architectural design.

6. TEMPLES OF GUJARAT

The earliest temples of Gujarat, attributable to the Maitrakas of Valabhi, are small structures of

TEMPLES OF GUJARAT

a simple plan and design showing a tall plain *jaṅghā*, surmounted by a pyramidal roof of stepped cornice-like courses, decorated with a diminishing number of bold *chaitya*-windows. The temple at Gop (District Jamnagar), assignable to the sixth century, is the earliest temple with the shortest roof comprising two such courses, while the temple at Bileswar (District Junagadh), with a tall roof of six tiers, is the most evolved example of this class, dating from the close of the seventh century. More than fifty kindred temples, with the roof comprising three-to-five similar tiers, have been located along the coastal region of Gujarat, at such sites as Pindara, Navi-Dhrewad and Son-Kansari (District Jamnagar), Harshadmata near Miyani, Kinderkheda, Visawada, Khimeswar and Bhanasara (District Junagadh) and Kalsar (District Bhaunagar).

The Varāha temple at Kadwar, near Prabhas-Patan (District Junagadh), assignable to the late seventh century, forms a link between the Maitraka temples and the neighbouring Sun temple at Sutrapada of the early eighth century, exhibiting a rudimentary northern *śikhara* of the *tri-ratha* form. The two temples have essentially a similar plan comprising a sanctum with ambulatory, a *maṇḍapa* with a sloping roof and an entrance-porch. The Sutrapada temple is followed by the temples at Roda (District Sabar-Kantha) of the late eighth century, comprising a sanctum with a stunted *tri-ratha* or *pañcha-ratha śikhara* and an entrance-porch with an occasional *maṇḍapa* carrying a simple pyramidal roof. Almost coeval with the Roda group is Harishchandra-ni-Chori at Shamlaji (same District), with flat-roofed *raṅga-maṇḍapa* (open *maṇḍapa*).

A further evolution of the regional style is traceable through the ruined Sun temple at Bhimnath

NORTHERN TEMPLES

near Prabhas-Patan, the Khimrana temple near Jamnagar, the Śiva temple at Manjal in Kutch and the small shrines at Miyani, all of the ninth century, followed by the celebrated Rāṇakdevī temple at Wadhwan (District Surendranagar). The last is notable for the exquisite workmanship and proportions of its *pañcha-ratha śikhara* (pl. LVII). Almost coeval with the Wadhwan temple and sharing with it a full-fledged *pañcha-ratha śikhara* is the Gaṇeśa temple at Ghumli (District Jamnagar) which, nevertheless, perpetuates Maitraka tradition in its tall plain *jaṅghā*.

Among the tenth-century temples of Gujarat prominent are the Lākheśvara temple at Kerakot and Śiva temple at Kotai (both in Kutch), Amther-mātā temple at Vadnagar and the Trinetreśvara and Muni-Bāwā temples near Than (both in District Surendranagar). The Kotai temple resembles in significant architectural and decorative features the Ambikā-mātā temple at Jagat in Rajasthan (above, p. 169), while the Muni-Bāwā temple is the earliest regional example to exhibit an octagonal *maṇḍapa* with eight *vidyādhara*-brackets. They are closely followed by the Bhāḍeśvara temple at Anjar in Kutch and the Viṣṇu temple at Sander (District Mehsana), both of which represent the incipient Solankī style.

Under the Solankī kings of Gujarat blossomed a distinctive and prolific regional building-art called the Solankī style which appeared with its full vocabulary in the early eleventh century during the reign of Bhimadeva I. On plan a Solankī temple consists of a sanctum, a closed hall (*gūḍha-maṇḍapa*) and a porch. In larger temples a detached peristylar hall, known as the *sabhā-maṇḍapa*, is added in the same axis, often preceded by an ornamental arched entrance (*kīrtti-toraṇa*). In rare cases the

TEMPLES OF GUJARAT

maṇḍapa has more storeys than one. In elevation the Solāṅki temple has the usual components of a northern temple, but the mouldings and decorative ornaments of the components below the *śikhara* occur in a definite sequence. Thus, the lowest mouldings of the basement are defined and are surmounted by friezes representing elephants and humans (*gaja-thara* and *nara-thara*). Similarly, the arrangement and embellishment of the *jaṅghā* and its surmounting mouldings and decorations also conform to a fixed pattern. An overhanging eaves-like moulding separates the *jaṅghā* from the *śikhara*, which is similar in design to the Rajasthan temples, while the *maṇḍapa* is covered by a *saṁvaraṇā* roof, which consists of a pyramidal composition of diagonally arranged rooflets, crowned by bell-members. The interior arrangement also displays individual features. The *maṇḍapa*-halls are peristylar in design and the pillars are lavishly ornamented with figures and decorative designs arranged in a definite order. The hall shows an octagonal arrangement, and its ceiling consisting of diminishing concentric rings is richly carved and often terminates in an exquisitely designed central pendant. In larger structures, ornamental arches (*toraṇas*) are thrown across the principal pillars of the *maṇḍapa*.

The earliest Solāṅki monument is the temple of the Sun-god at Modhera (District Mehsana), marking the grandest achievement of the style. Dating from 1026, the temple comprises of three separate but axially-aligned and integrated elements, viz. (1) the main complex comprising sanctum with ambulatory, *gūḍha-maṇḍapa* and porch, (2) *sabhā-maṇḍapa* with a *kīrtti-toraṇa* in front, and (3) a large flagged tank decorated with an array of miniature shrines. The *sabhā-maṇḍapa*, described as a 'magnificent pile of

NORTHERN TEMPLES

pillared splendour', is a diagonally-disposed hall with an octagonal arrangement of central pillars carrying *torana*-arches. Even in its ruined state the temple is a majestic conception with an ornate plinth and a *jaṅghā* embellished with dignified sculptures dominated by images of the Sun-god.

The Modhera temple is followed by the Rudreśvara temple at Prabhas-Patan, wherein the octagonal design of the *mandapa* is absent. Of the remaining Solanki monuments of the early eleventh century noteworthy are the Someśvara temple at Gorad, Śiva temple at Sander, Mātā temple at Dhinoj and the main temple of Limboji-mātā at Delmal (all in District Mehsana). The Nilakanṭha-Mahādeva temple at Sunak in the same District is the most developed among the eleventh-century temples, showing a *śikhara* with three rows of embreasted miniature *śikharas* and an octagonal *mandapa*-ceiling decorated with twelve bracket-figures of divine nymphs.

A prolific architectural activity was recorded during the twelfth century under the active patronage of the Solanki rulers Siddharāja Jayasimha (1094-1143) and Kumārapāla (1143-72). Among the early twelfth century temples prominent are the Navalakhā temple at Sejakpur (District Surendranagar), the Rudra-mahālaya at Sidhpur (District Mehsana) and the double-shrined temple at Viramgam (District Ahmadabad). The Rudra-mahālaya was a magnificent multi-storeyed Śiva temple with eleven subsidiary shrines dedicated to the eleven *Rudras*, now in fragments. Vadnagar (District Mehsana) had a temple comparable in size and grandeur with the Rudramahālaya, as is indicated by the extant remains of a pair of *kīrtti-toranas*.

TEMPLES OF GUJARAT

Side by side with larger temples, smaller ones with a modest plan, comprising a sanctum, a *maṇḍapa* and occasionally a porch, were also built displaying the characteristic architectural and decorative traits of the style. Of these mention may be made of the Hingloji-mātā temple at Khandosan, (dated 1150), Jasmalnāth temple at Asoda, Śitalā-mātā temple at Piludra, Śiva temple at Ruhavi, Someśvara temple at Kanoda and the triple-shrined temple at Kasara (all in District Mehsana).

The celebrated temple of Somanātha at Prabhas-Patan was originally built during the tenth century and underwent successive demolitions followed by reconstructions. Thus, after the sack of Maḥmūd of Ghazni in 1025 the temple was rebuilt by Bhima I. But the greatest temple belonged to the time of king Kumārapāla, resembling in dimensions and essential design the Rudra-mahālaya at Sidhpur. This edifice comprised a sanctum enclosed by ambulatory with three transepts, a vestibule and a magnificent *gūḍha-maṇḍapa* with three entrances. It had a lofty and ornate plinth and a loftier *jaṅghā*, adorned with two rows of sculptures, the battered remnants of which are now exhibited in the local museum.

The colossal Jaina temple at Taranga (District Mehsana), originally attributable to king Kumārapāla but renovated subsequently, is likewise an impressive structure for its size as well as design.

The momentum of building-spree was maintained during the thirteenth century, though towards the latter half of the century the old vigour and elegance gave way to artistic ossification. The earliest temple of this century is the Nilakanṭha-Mahādeva temple at Miyani, dated 1204, with a well-proportioned *śikhara* and a plain *raṅga-maṇḍapa*. The Navalakhā temple at Ghumli (District Jamnagar), following it

NORTHERN TEMPLES

closely, is a richly-ornamented ambitious structure, comprising a sanctum with ambulatory and a two-storeyed *mandapa* of a design, somewhat akin to that of the larger Sās-bahū temple at Gwalior (above, p. 174).

The later temples, affiliated mostly to the Jaina faith, are largely concentrated on the sacred hills like Girnar (District Junagadh) and Satrunjaya (District Bhaunagar), the latter showing a cluster of five hundred temples in eleven separate enclosures. These temple-cities are haphazard growths without any regular plan and most of their structures have lost the original character due to repeated renovations. Nevertheless, the triple-shrined temple of Neminātha at Girnar, built by the celebrated Jaina minister Tejapāla in the thirteenth century, is a creditable specimen of Solanki architecture.

7. TEMPLES OF ORISSA

Orissa had a distinctive regional style which started in the seventh century with the earlier group of temples at Bhubaneswar and culminated in the thirteenth century in the Sun temple at Konarak (District Puri). The course of evolution here is towards a greater elaboration of the plan and elevation from *tri-ratha* to *sapta-ratha* and an increasing sophistication of the decorative and plastic ornaments. There was a corresponding increase in the number and height of the mouldings of the basement, *varaṇḍikā* (region between the *jaṅghā* and *śikhara*) and of the storeys and crowning members of the *śikhara*. A steady trend towards the accentuation of height widens the ratio between the size of the sanctum and the height of the *śikhara* from 1:3 at the initial stage (Paraśurāmeśvara temple) to approximately 1:7 in

TEMPLES OF ORISSA

the latest temple at Konarak. Whereas in the characteristic Orissan temples the sanctum with the curvilinear *śikhara* (*rekhā-deul*) is invariably associated with a square astylar *maṇḍapa* (*jagamohana*) with a pyramidal roof of horizontal tiers (*pidhā-deul*), on the earlier temples the *maṇḍapa* is a closed pillared hall covered by a low flat roof of two sloping tiers with a clerestory in between.

The Paraśurāmeśvara temple, dating from about the close of the seventh century and representing the earlier group of temples, has such a pillared *maṇḍapa* attached to a *tri-ratha* sanctum with a stunted and broad-shouldered curvilinear *śikhara*. The niches on the central projection of the *jaṅghā* of the sanctum jut out and have preserved on the south and east sides massive figures of Gaṇeśa and Kārttikeya. The façades of the *maṇḍapa* are carved with a large number of Brāhmaṇical deities and decorative motifs. The interior of the temple is plain in contrast with the ornate exterior. The doorways are of the over-door design, that of the sanctum being carved on the architrave with inscribed figures of all the planets but Ketu, a characteristic of the earlier Orissan temples.

The next stage is marked by the Vaitāl-Deul, which with its uncommon architectural form is notable for sculptural grace and decorative exuberance. On plan it comprises an oblong sanctum with a wagon-vault roof (locally called *khākharā*) and a *maṇḍapa* similar to that of the Paraśurāmeśvara with the addition of a subsidiary shrine roofed by a *tri-ratha śikhara* at each corner. The treatment of its *jaṅghā* and *śikhara* with sculptures and decorative ornaments is unique in Orissa. Dedicated to the goddess Chāmuṇḍā, the temple dates from the close of the eighth century.

NORTHERN TEMPLES

The Mukteśvara temple, (pl. LVIII) assignable to the middle of the ninth century, marks a transition between the earlier and later temples at Bhubaneswar. Surrounded by a low enclosure-wall, the temple is entered through an ornate *makara-toraṇa*. It retains some of the earlier features, e.g. a single row of sculptures on the *jaṅghā* and a recess dividing the *jaṅghā* from the *śikhara* which shows a gradual curvature above the recess. The sanctum, however, is now a full-fledged *pañcha-ratha* on plan and in elevation and the *maṇḍapa*-roof has horizontal tiers, though with a simple *kalaśa* (vase) as a crowning ornament. Further, the basement has now five developed mouldings and the *jaṅghā* introduces some of the typical Orissan ornaments like female figures in enchanting poses (*kanyās*), *nāgas* or *nāgīs* entwining pilasters and *gaja-vyālas* (lion-on-elephant motif). Its *śikhara* has a rounded contour and shows on the central projection an elaborate *chaitya*-window flanked by two grinning dwarfs, constituting an early form of the *bho*-motif, characteristic of the developed Orissan style.

The typical Orissan form emerges in the tenth century with the temples called Siddheśvara and Kedāreśvara.

The Rājārāṇī temple, datable roughly to the early eleventh century, represents a unique experiment in Orissa in that its *śikhara* is clustered by miniature repetitions of itself, as on the temples of western and central India including Khajuraho. This temple is also notable for its sculptural excellence and profusion of ornaments.

The Liṅgarāja temple, also dating from the eleventh century, is the grandest and loftiest (45 m. high) temple marking the culmination of the architectural activity at Bhubaneswar. Originally the temple

TEMPLES OF ORISSA

consisted of the sanctum and *maṇḍapa* and two other halls were subsequently added to it axially. The sanctum is *pañcha-ratha* on plan with its portion below the *śikhara* of five divisions, resting on a basement of five richly-carved mouldings. The central niche-projections on the three sides show images of Gaṇeśa, Kārttikeya and Pārvatī which are remarkable for their fine modelling and imposing size. The lower register of the *jaṅghā* is embellished with niches representing miniature shrines with wagon-vault roof (*khākharā-muṇḍis*) and the upper with those having roofs of horizontal tiers (*pidhā-muṇḍis*). The former niches contain figures of the *dik-pālas* and miscellaneous friezes, and the latter niches contain images of various Brāhmaṇical deities. While the recesses of the lower *jaṅghā* are decorated with a variety of *vyālas* (lion-like mythical animals), those of the upper *jaṅghā* show graceful female figures in enchanting postures. The height and soaring character of the towering *śikhara* are emphasized by the deeply-incised lines of the *rathas* (vertical projection), a pair of which carry four diminishing replicas of the tower itself as a decorative pattern. Like other principal mouldings, the storeys of the *śikhara* have also increased in number as well as in height.

The *maṇḍapa* or *jagamohana* (height 29·8 m.) constitutes a grand complement to the sanctum, its roof-tiers being exquisitely adorned with friezes of armed processions, pageantry and miscellaneous scenes. With its mature planning, impressive dimensions and appropriate plastic and decorative ornamentation, this temple ranks high among the architectural masterpieces of India.

Temples in this developed style, typified by the Liṅgarāja, continued to be built at Bhubaneswar

NORTHERN TEMPLES

and elsewhere in Orissa. The famous temple of Jagannātha at Puri, which is slightly later than the Liṅgarāja, shows the same mature plan but is loftier and larger.

The grand culmination of the style was reached in the Sun temple at Konarak. Built in the thirteenth century, it was conceived as a gigantic solar chariot with twelve pairs of exquisitely-ornamented wheels dragged by seven rearing horses. The temple comprised a sanctum with a lofty (presumably over 68 m. high) *śikhara*, a *jagamohana* (30·8 m. square and 30·8 m. high) and a detached *nāṭa-mandira* (hall of dance) in the same axis, besides numerous subsidiary shrines. The sanctum and the *nāṭa-mandira* have lost their roof. The *nāṭa-mandira* exhibits a more balanced architectural design than that of other Orissan temples. The sanctum displays superb images of the Sun-god in the three projections which are treated as miniature shrines. The sanctum and the *jagamohana* together stand on a common platform studded with an intricate wealth of decorative ornaments and sculptures, often of a highly erotic type.

The roof of the *jagamohana*, made of horizontal tiers grouped in three stages with life-size female sculptures of matchless charm and delicacy adorning each stage, the whole surmounted by two stupendous crowning members, produces a picturesque contrast of light and shade and is unparalleled for its grandeur and structural propriety. Majestic in conception, this temple is indeed one of the sublimest monuments of India, notable as much for its imposing dimensions and faultless proportions as for the harmonious integration of architectural grandeur with plastic elegance.

TEMPLES OF BENGAL

8. LATER TEMPLES OF BENGAL

Temples continued to be built in later centuries in the different regions of India, following the traditional regional modes with certain modifications and innovations. Although they are normally at a lower aesthetic level, some of them, like those of Bengal, impress by their pleasing forms and sculptures, the latter displaying the traditional vigour of folk-art. A group of Vaishṇava brick-temples at Bishnupur (District Bankura), dating between the seventeenth and eighteenth centuries, is characterized by a simple curved roof, representing the form of the regional bamboo-and-thatch constructions, and by a wealth of moulded brickwork and terracotta sculptures. The use of the typical Bengal *chhajjā* is illustrated by the Chār-Bāṅglā temple at Baranagar (District Murshidabad), while the leaf-hut is represented by the Rānī-Bhavānī temple near Murshidabad. Other popular forms are *pañcha-ratna* and *navā-ratna*, displaying a distinctive and pleasing grouping of *śikharas* in tiers.

KRISHNA DEVA

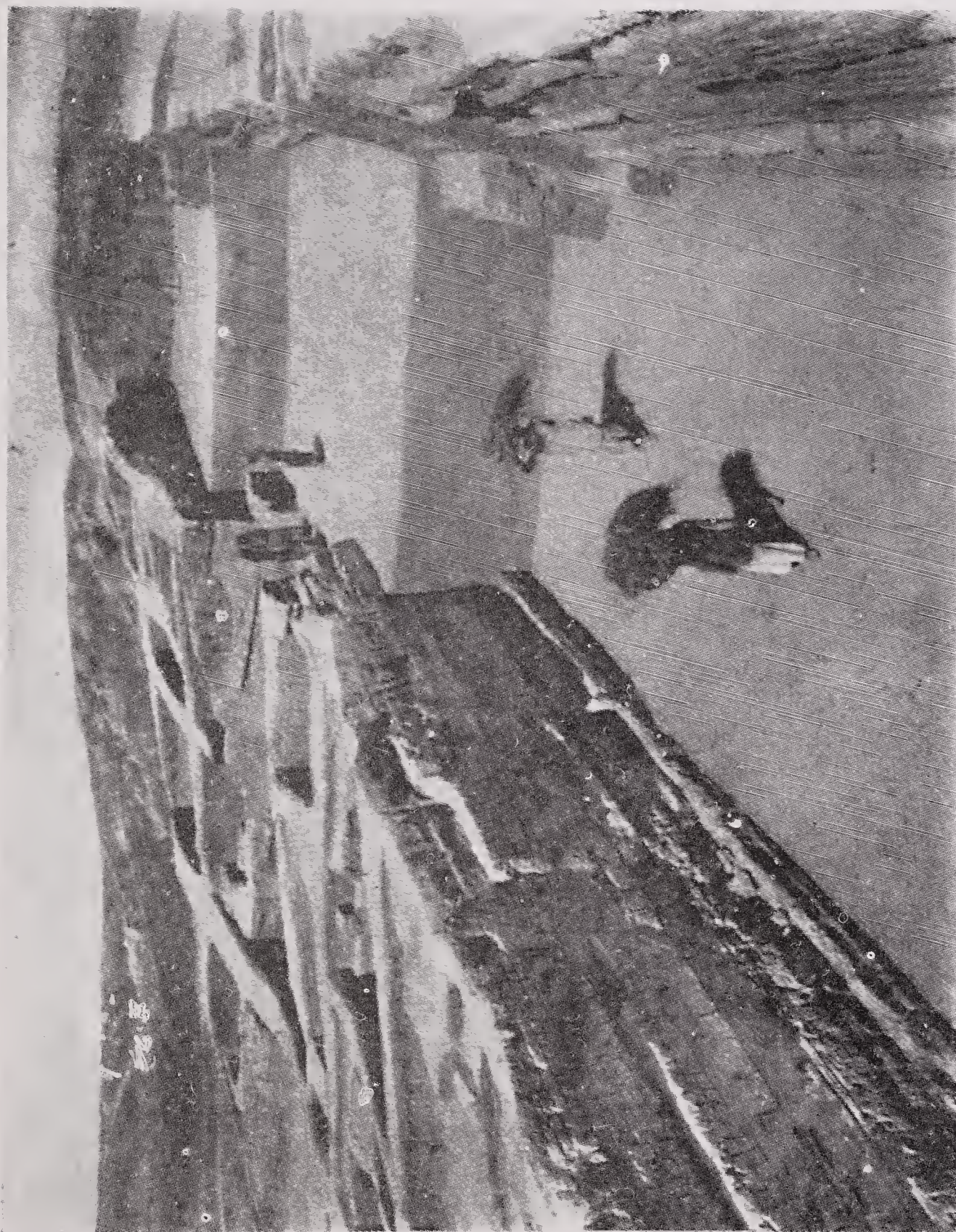


J. SINGH.

Fig. 4

PLATES

PLATE I



Kalibangan : street with houses on either side, Harappa period. See p. 5

PLATE II



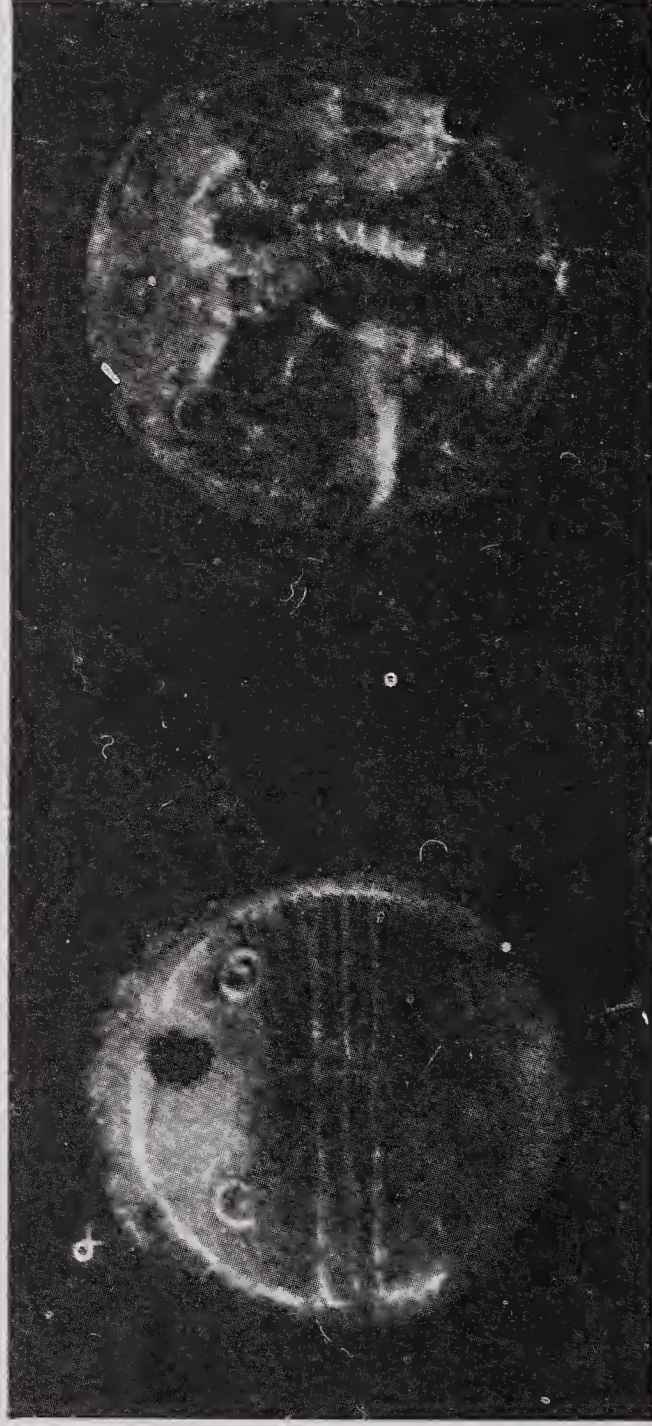
A



B

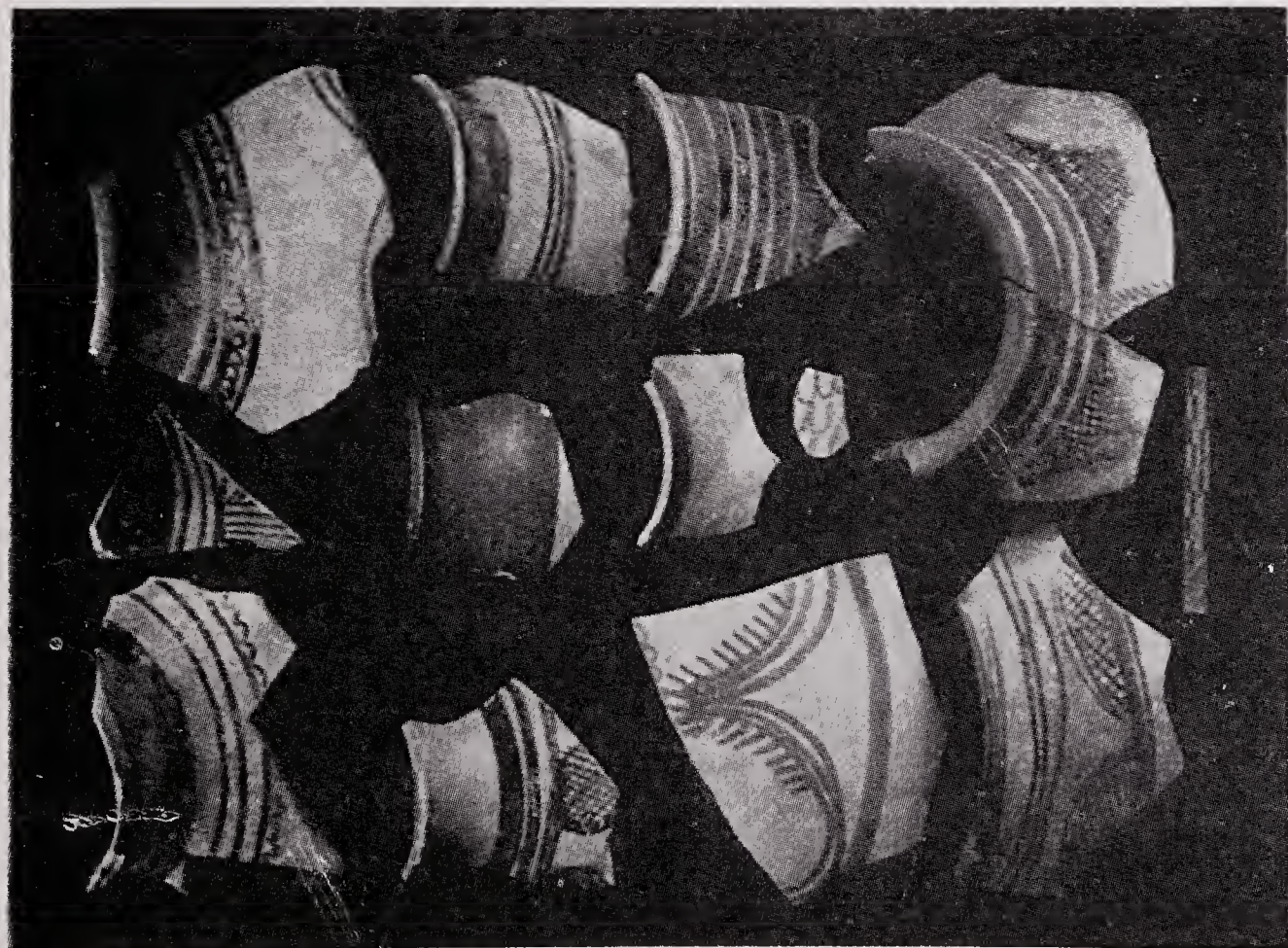


C

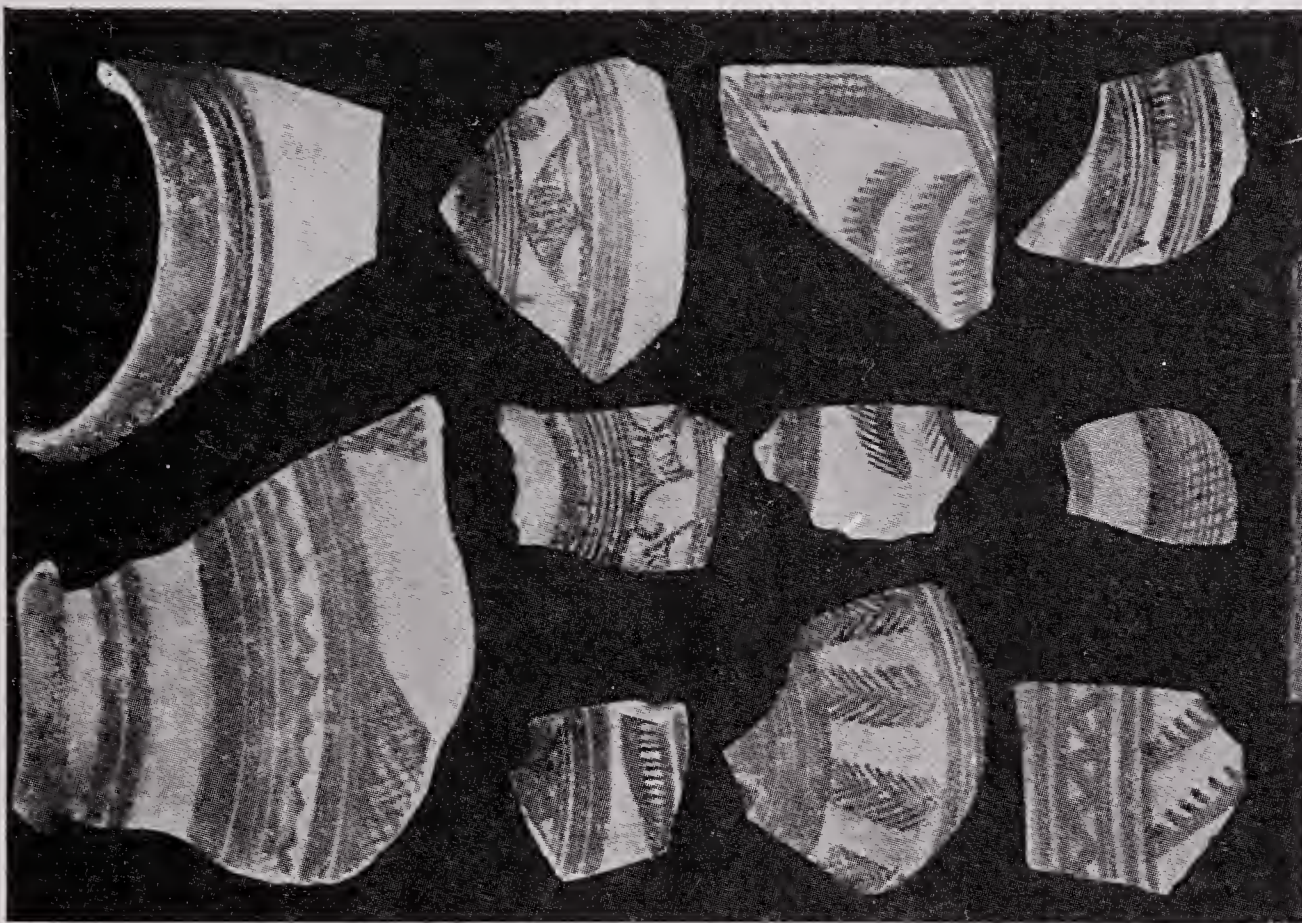


D

A, Rupar, B, Lothal and C, Kalibangan : Harappan sealings; D, Lothal : 'Persian Gulf' seal. See pp. 8, 28, 5 and 30



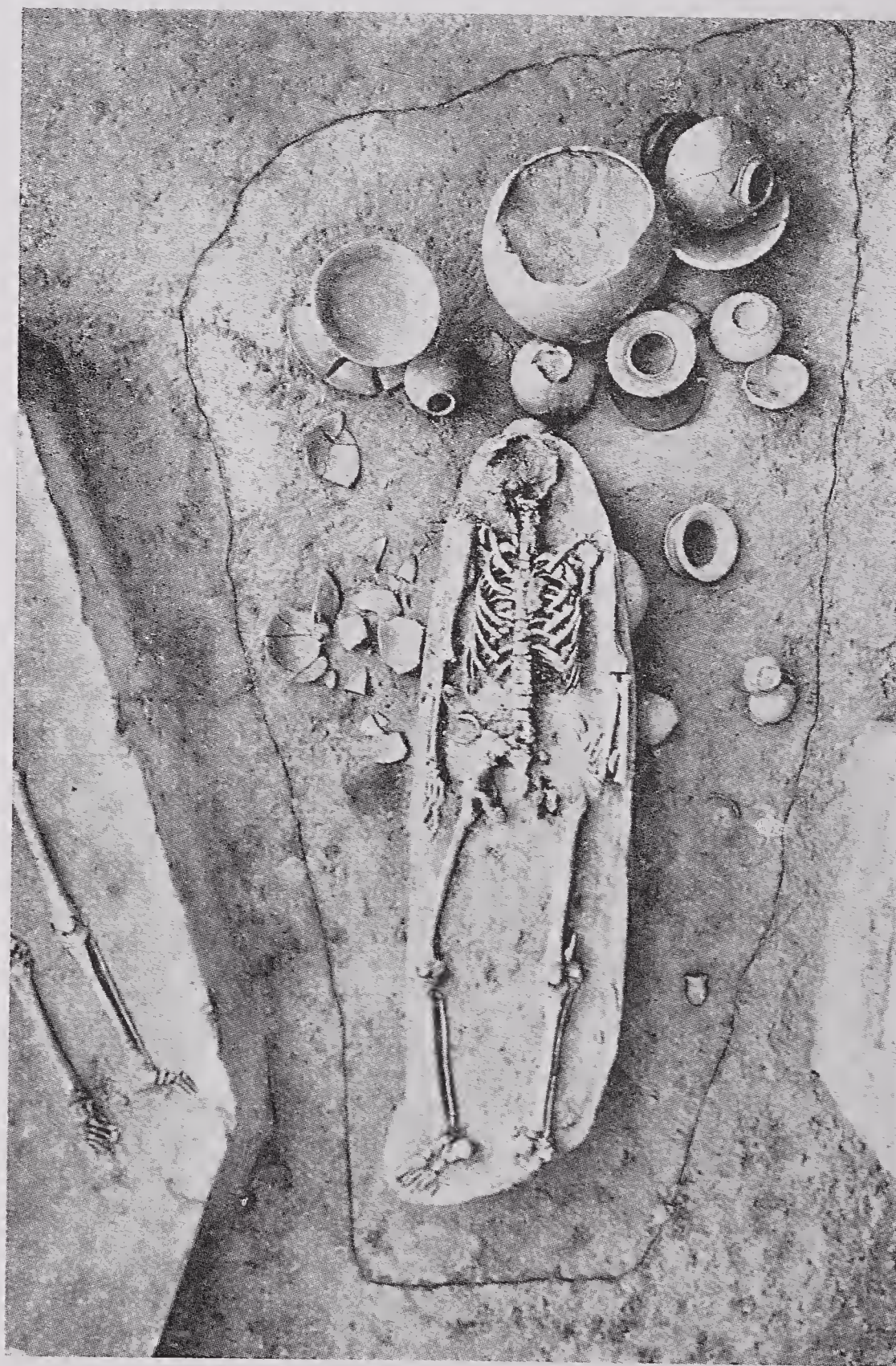
A



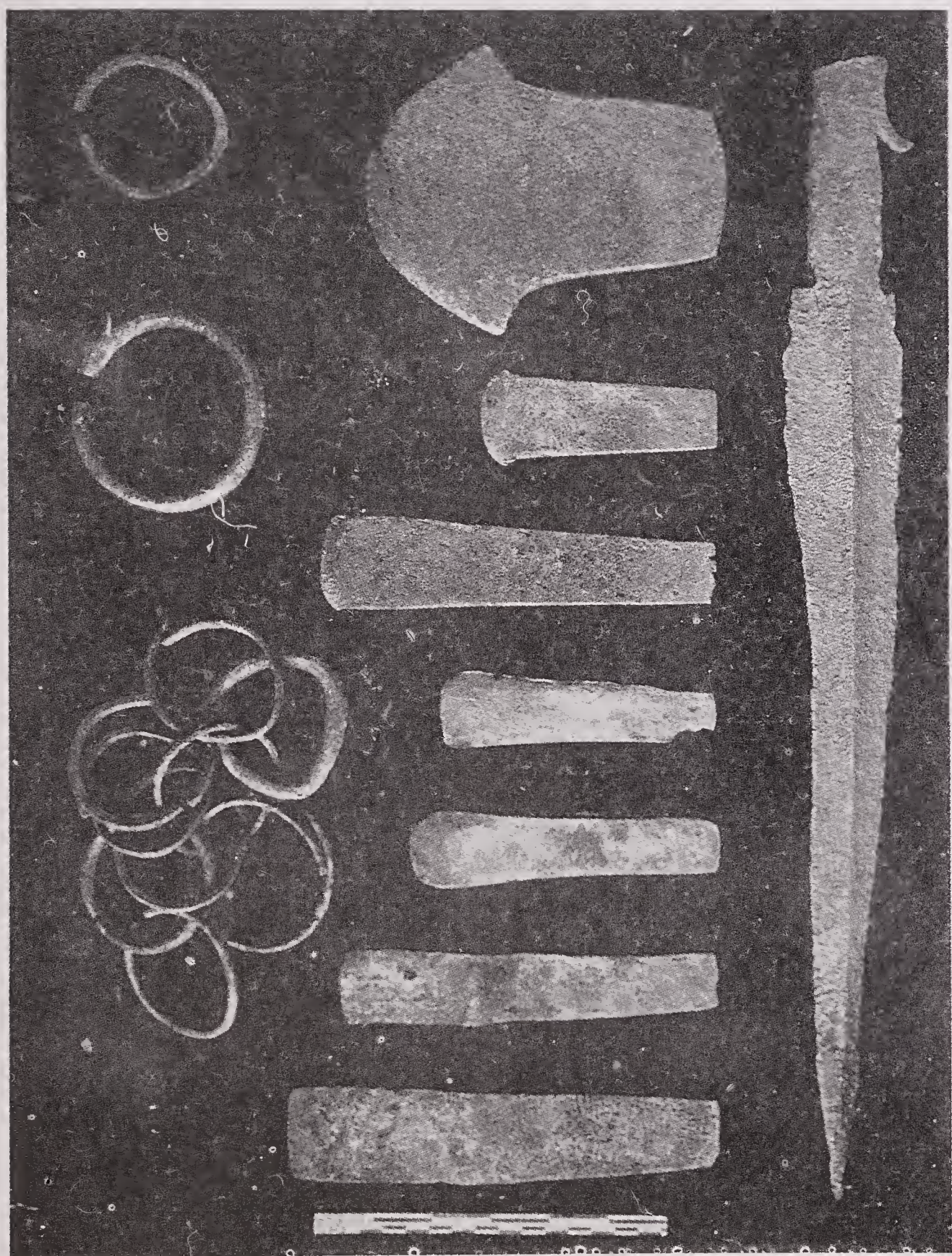
B

A, Kalibangan : pre-Harappan pottery; B, Bara : painted pottery. See pp. 4 and 9

PLATE IV

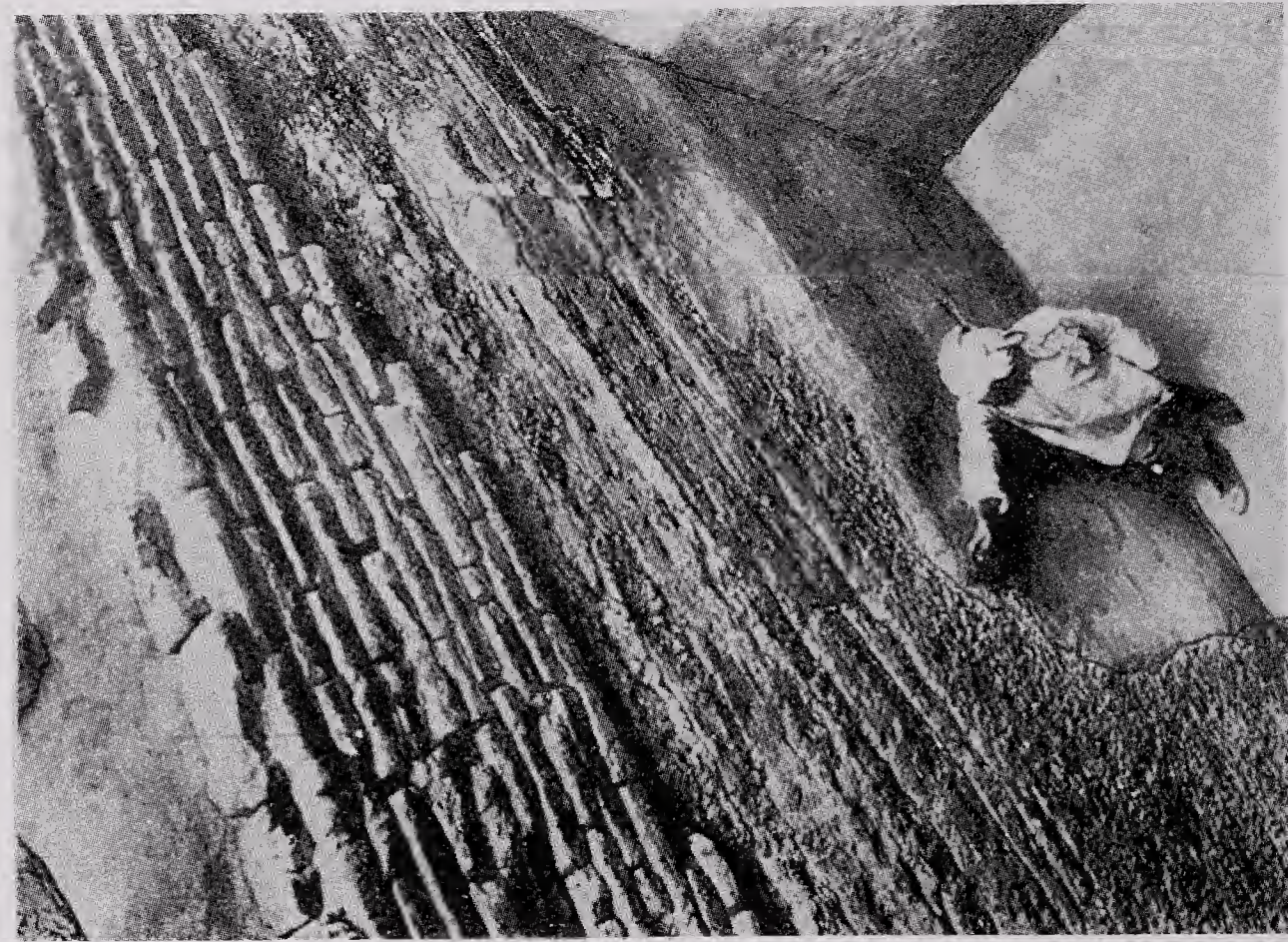


Rupar : burial, Harappa period. See p. 8



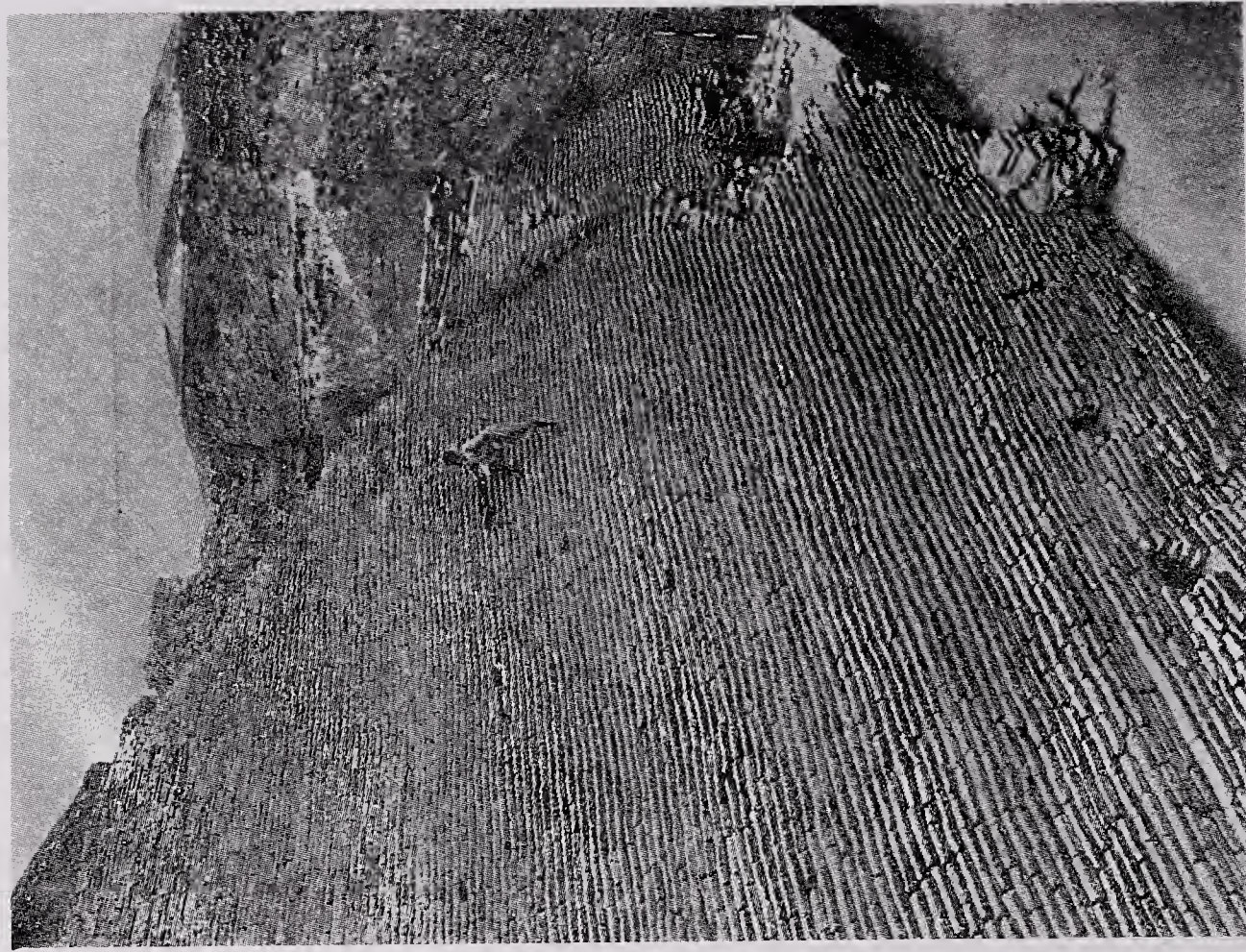
Bahadarabad : copper hoard. See p. 12

PLATE VI



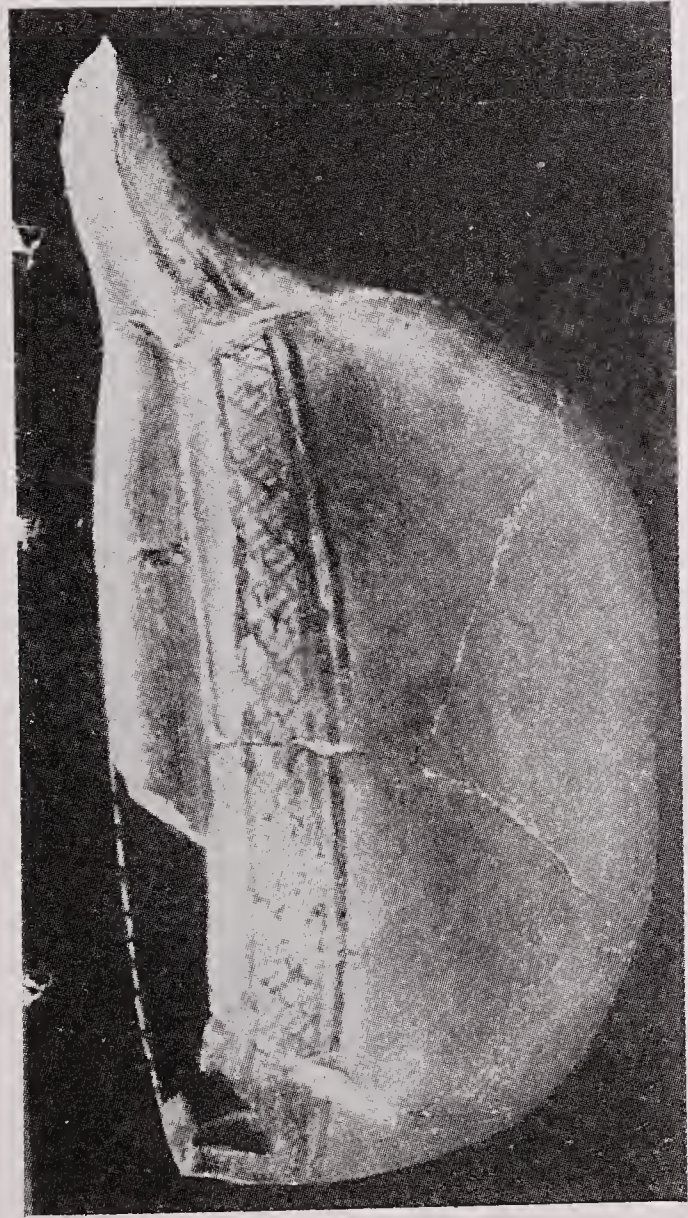
A

A, Hastināpura ; section showing erosion-line;

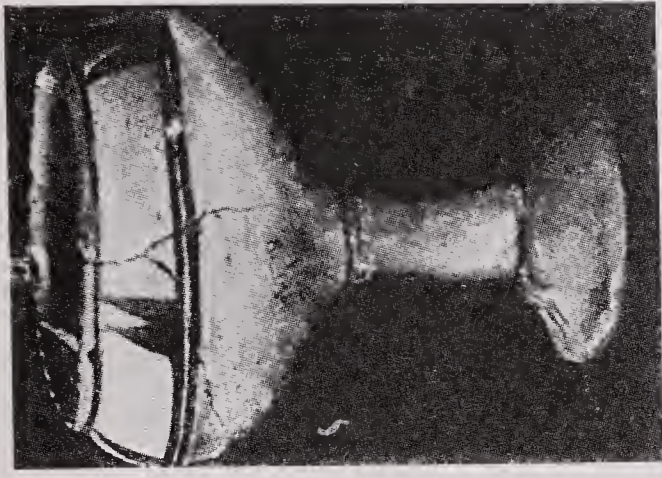


B

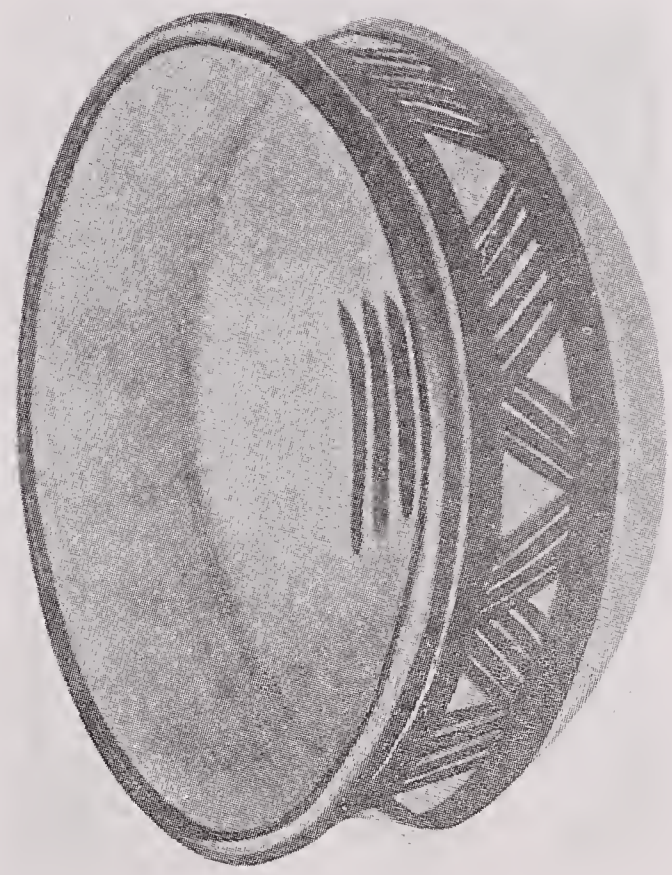
B, Kauśāmbī : defences. See pp. 13 and 14



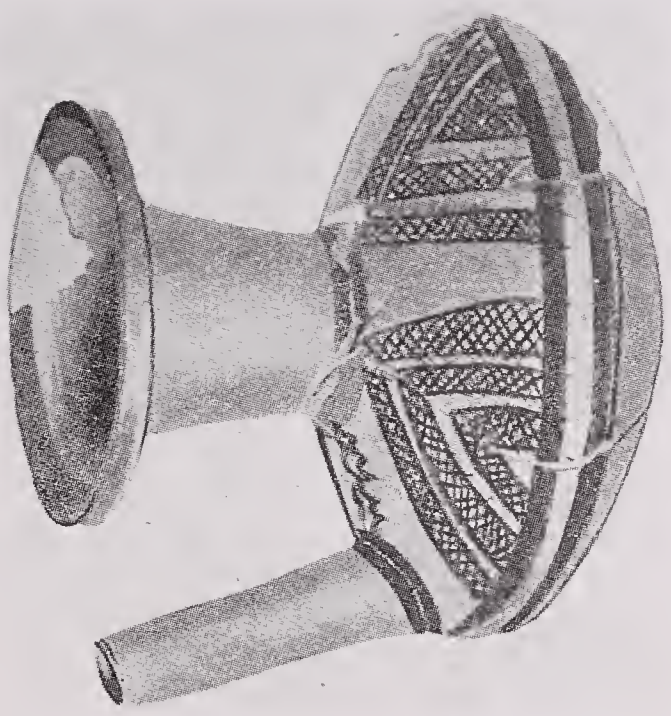
A



B



C

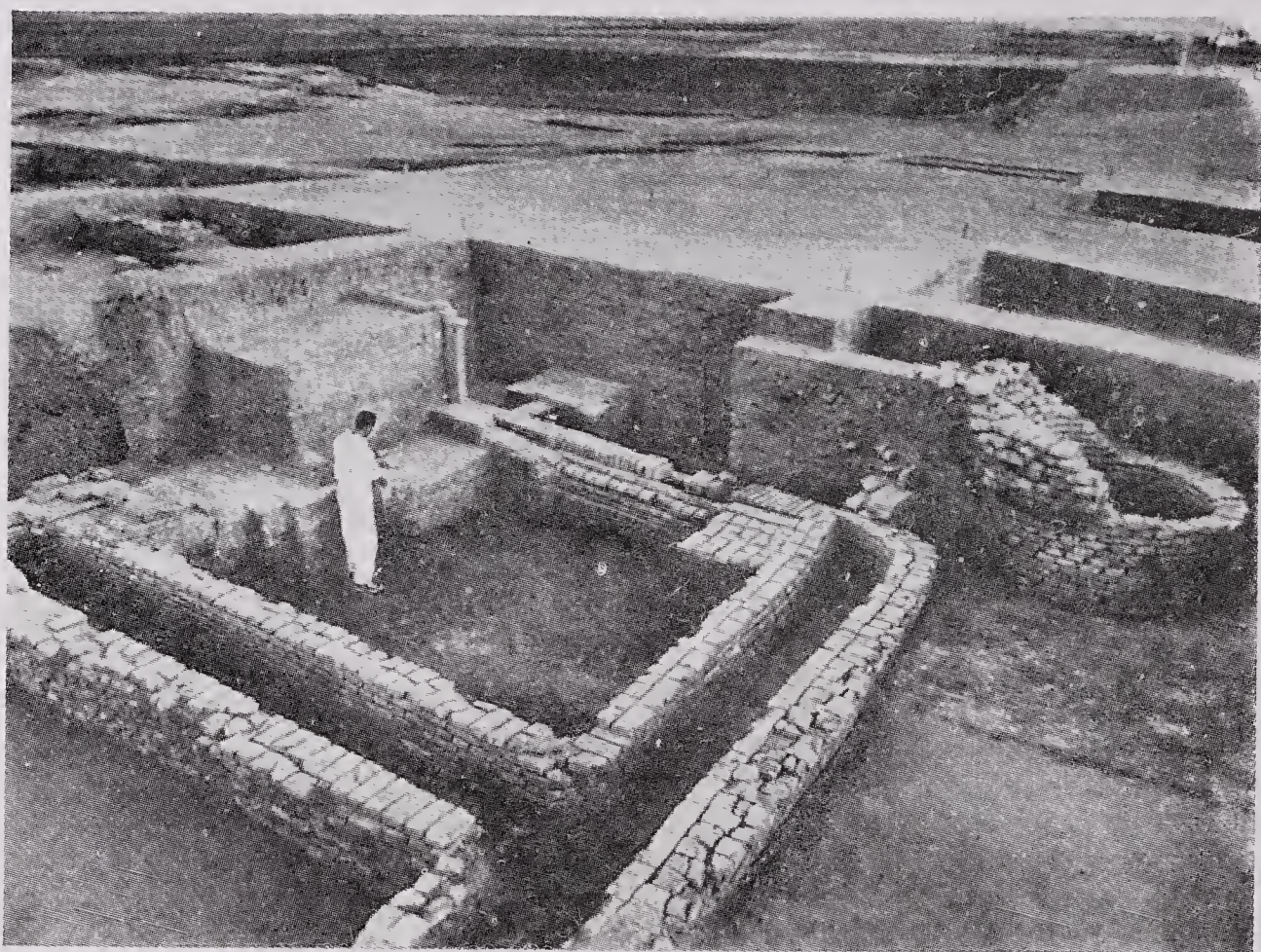


D

PLATE VII

A and B, Navdatoli : channel-spouted bowl and stemmed bowl; C, Jorwe : concave-sided bowl; D, Nevasa : spouted jar. See pp. 21, 24 and 25

PLATE VIII



A

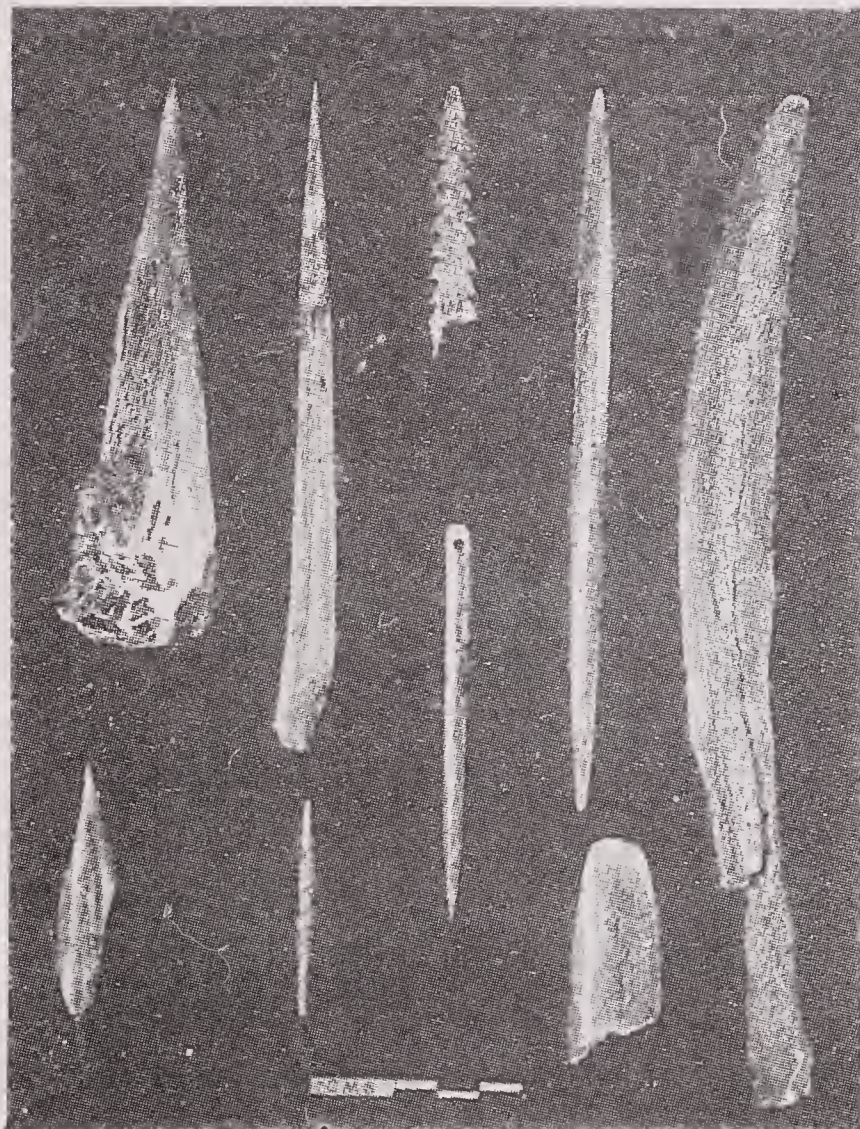


B

Lothal : A, drains and well, and B, dockyard with spill-channel, Harappa period. See pp. 29 and 30

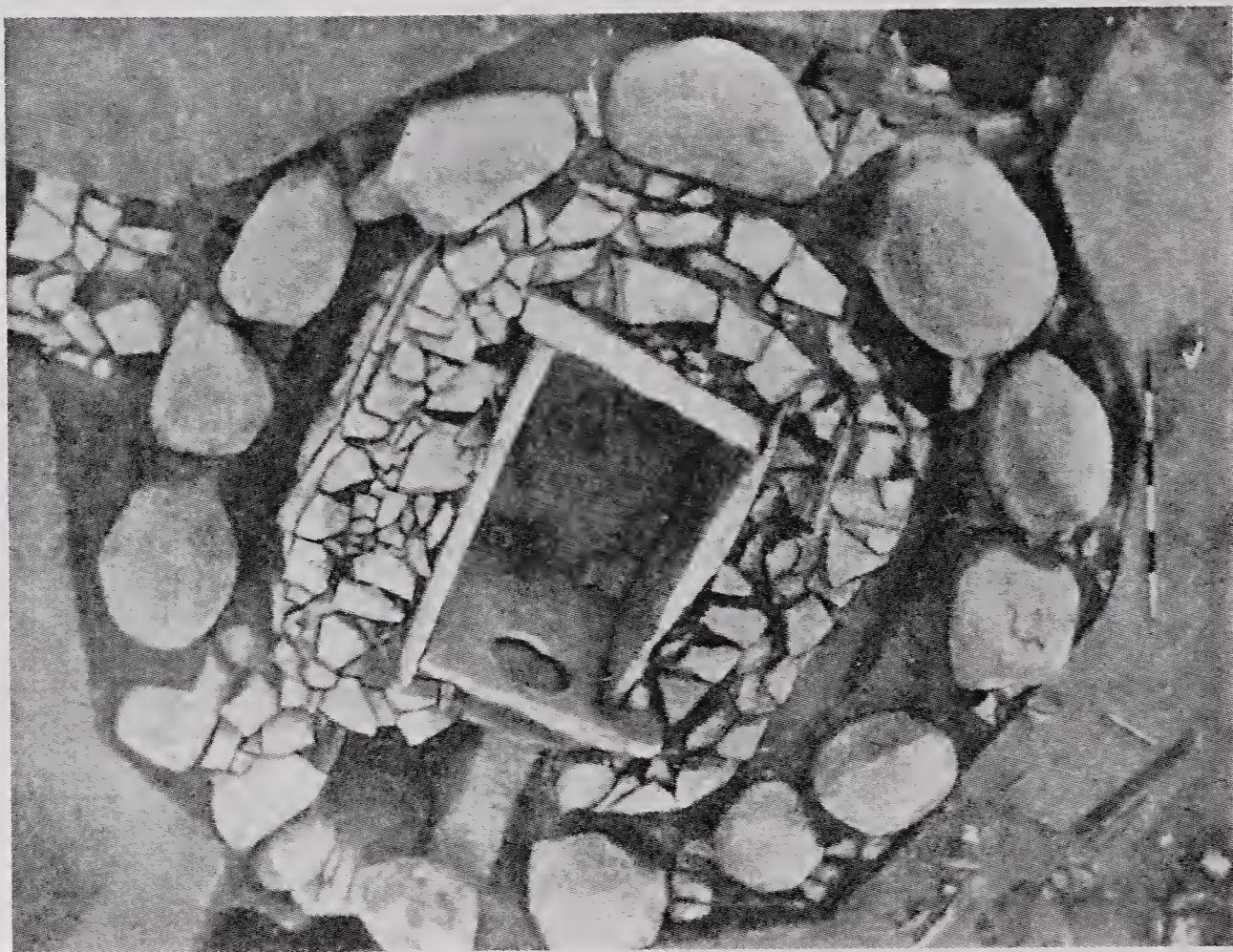


A



A, Cochin : umbrella-stone; B, Burzahom : bone tools.
See pp. 37 and 40

PLATE X



A

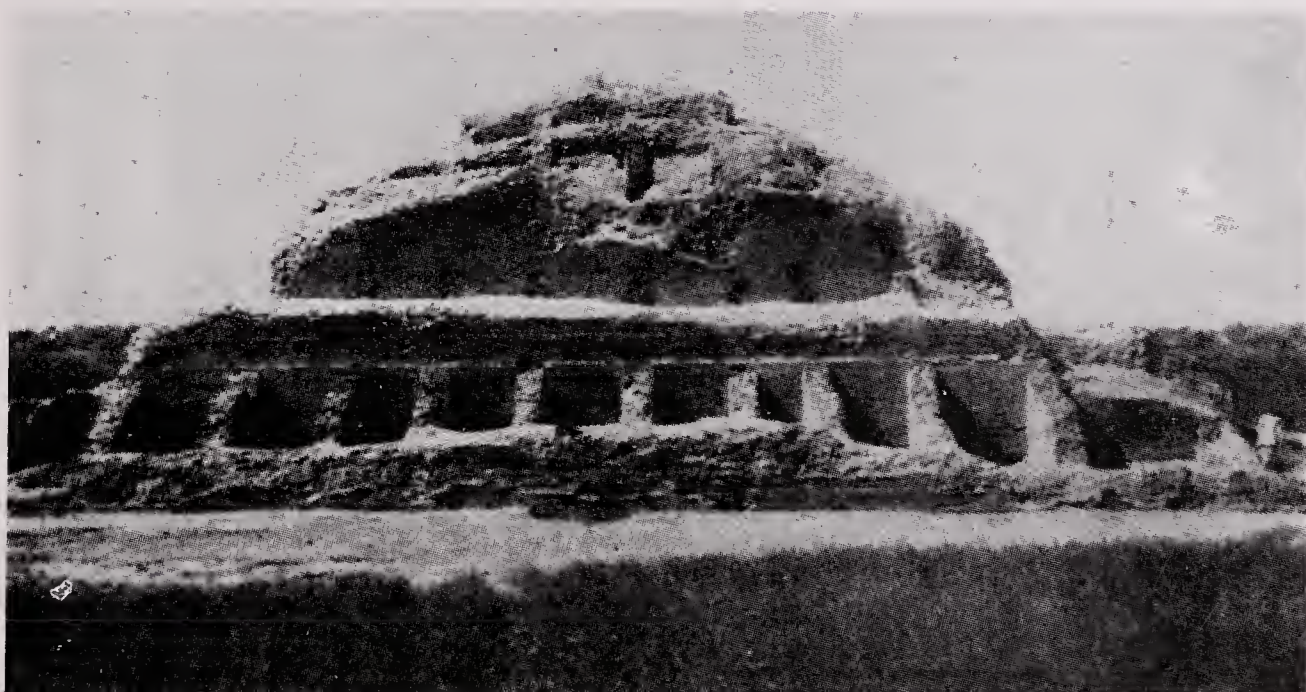


B

A, *Brahmagiri* : excavated megalith; B, *Sanur* : excavated sarcophagi. See p. 38



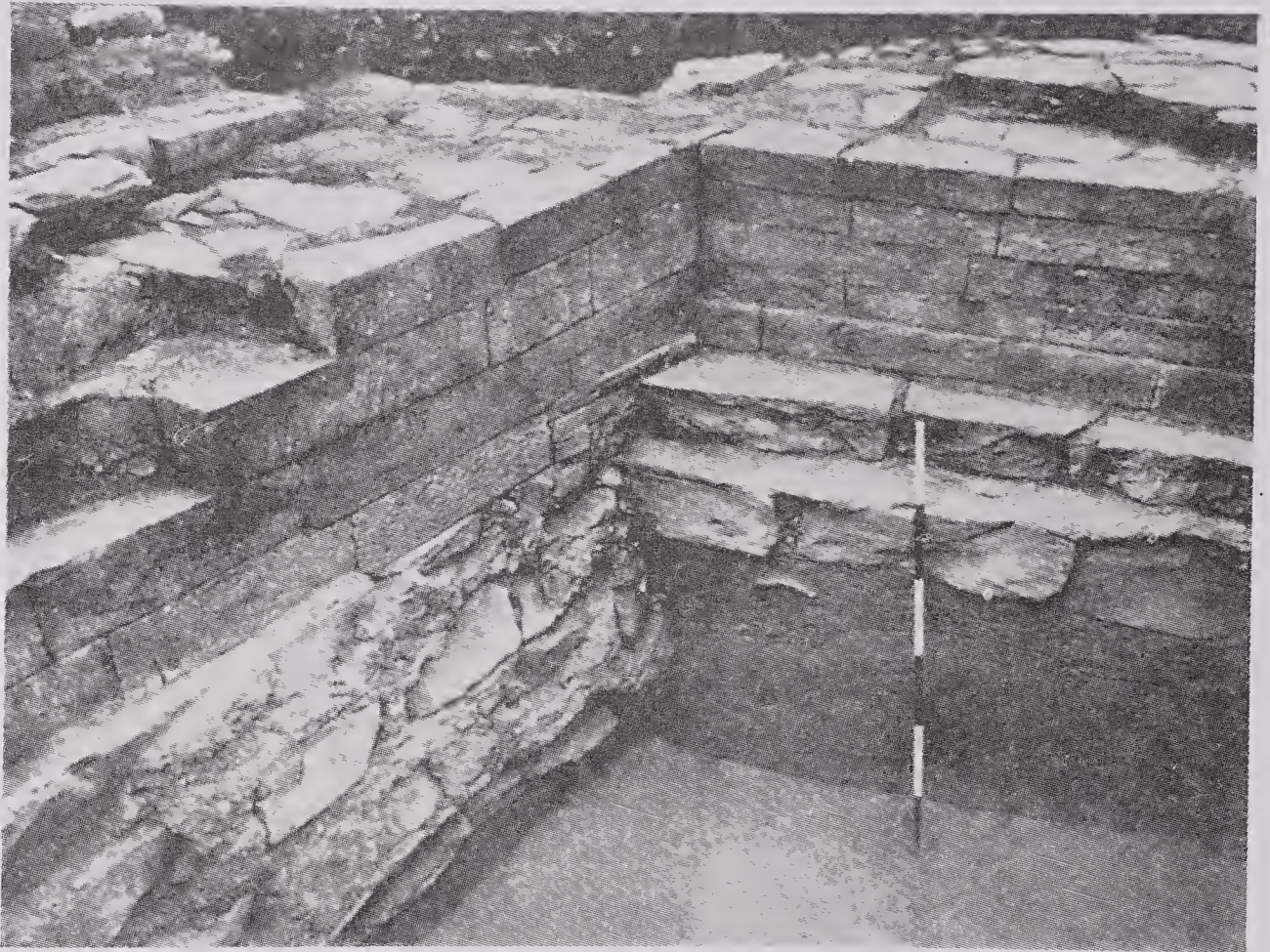
A



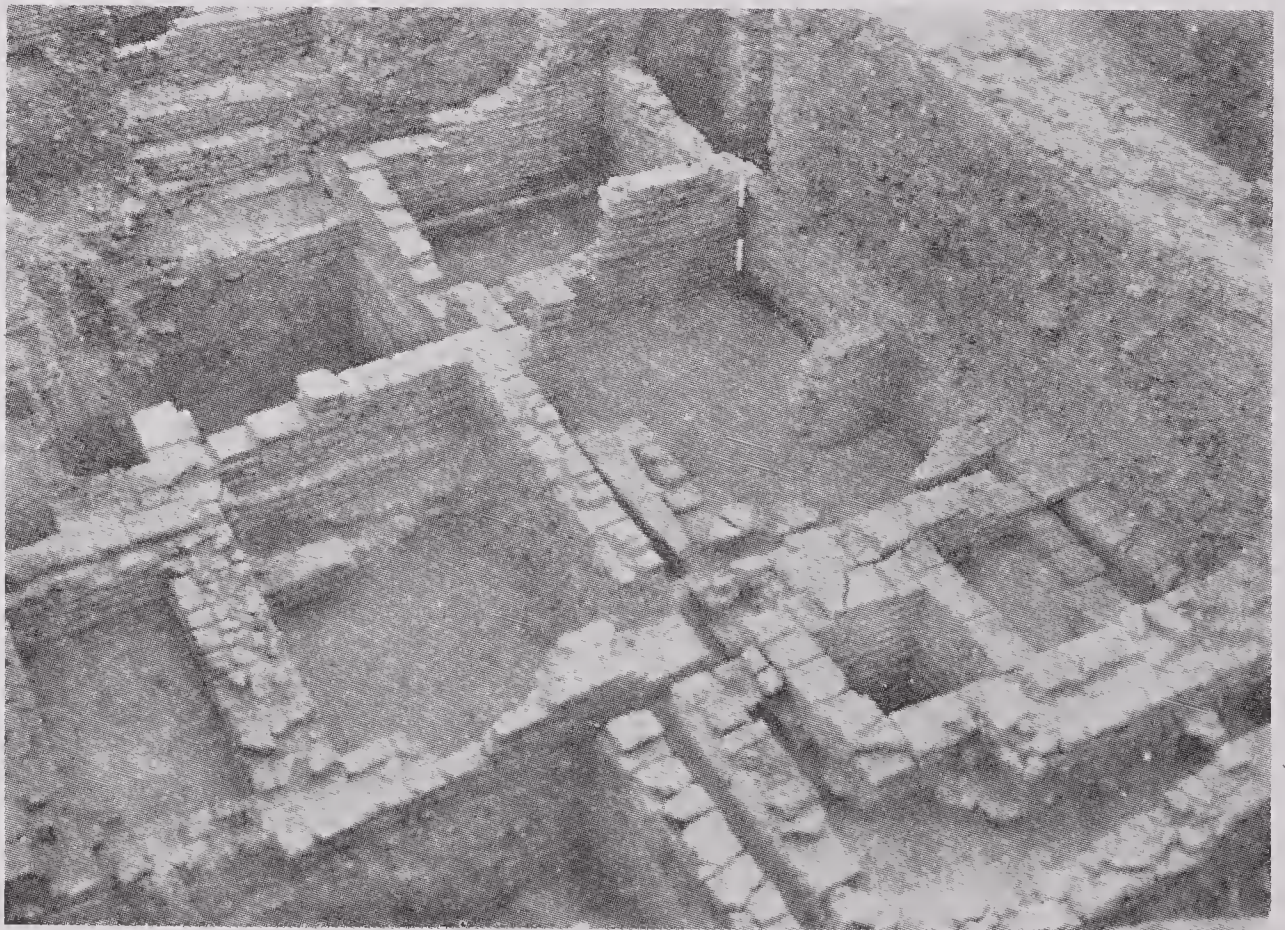
B

A, *Rupar* : retaining-wall of a tank with inlet; B, *Ahichchhatra* : terraced temple. See pp. 45, 49 and 51

PLATE XII



A

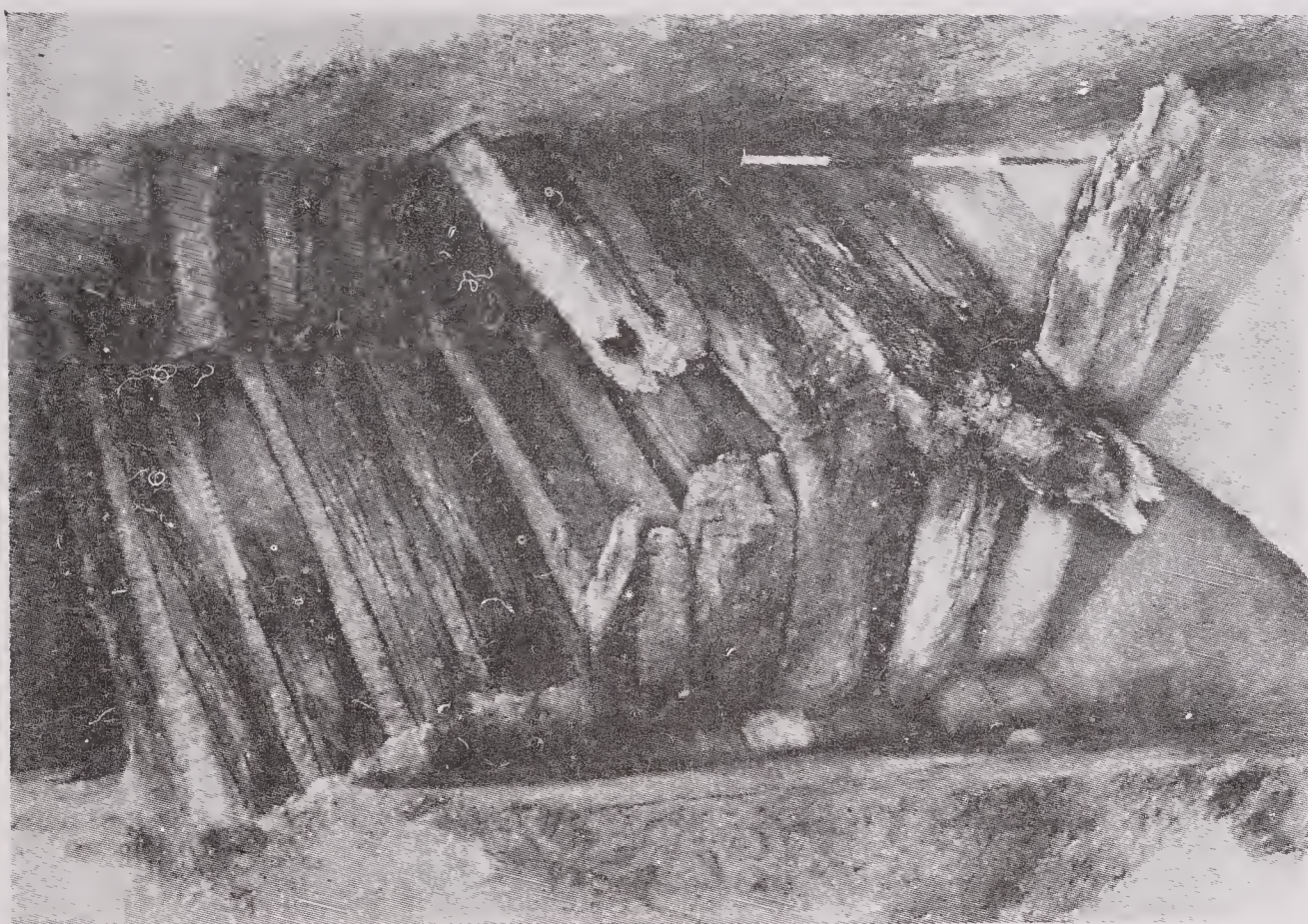


B

A, *Kauśāmbī* : palace-walls showing three phases; B, *Rajghat* : brick structures. See pp. 55 and 58



A



B

A, Rajgir : rubble rampart-wall; B, Ujjain : wooden rafters caging the rampart-wall.
See pp. 60 and 69

PLATE XIV



A



B

A, *Sisupalgarh* : gateway; B, *Arikamedu* : tank in a courtyard.
See pp. 82 and 83



A

B



C

D

A and B, Rupar : terracotta yaksha and mithuna figure ; C and D, Ujjain : terracotta figurines. See pp. 49, 51 and 70

A



B



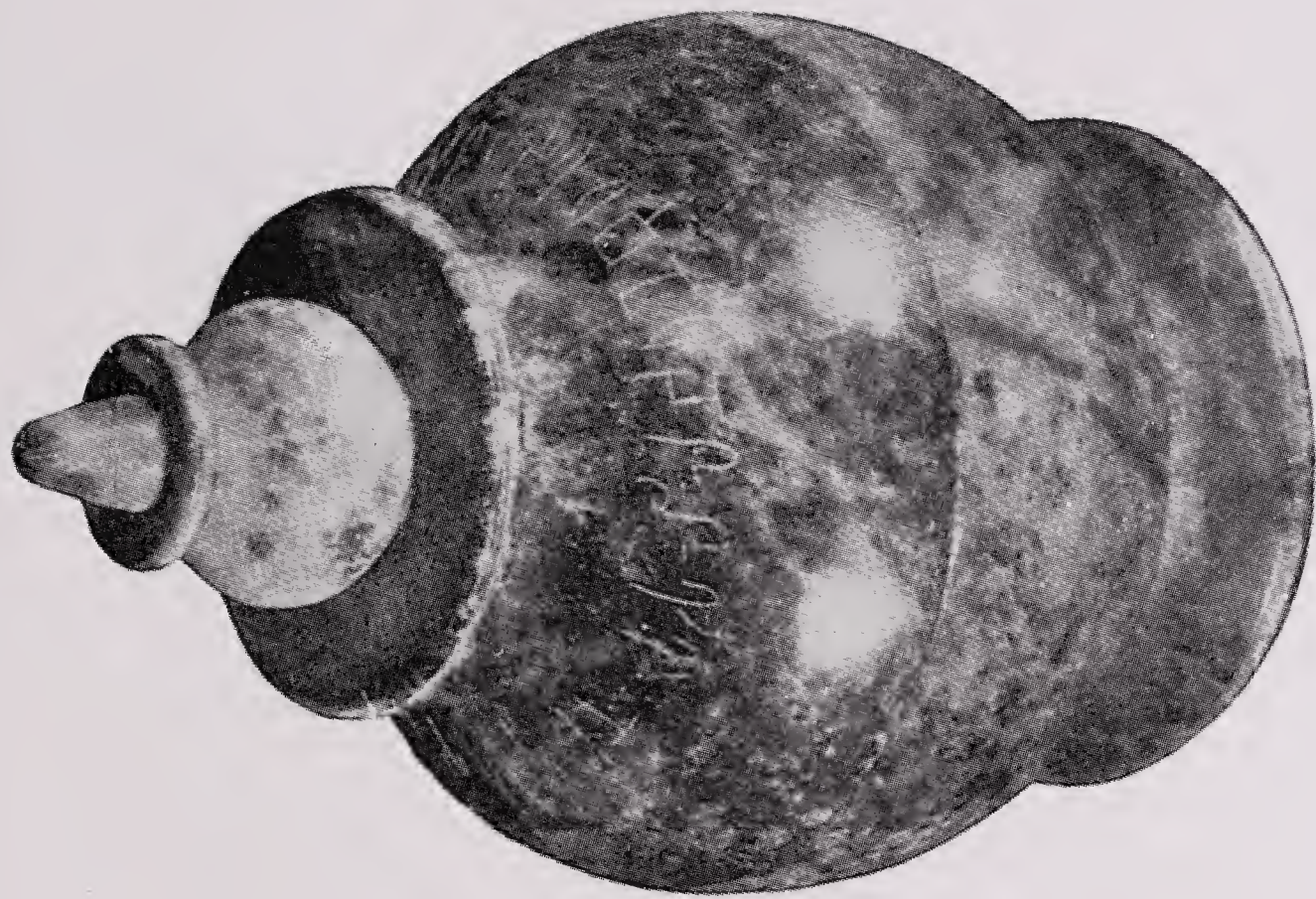
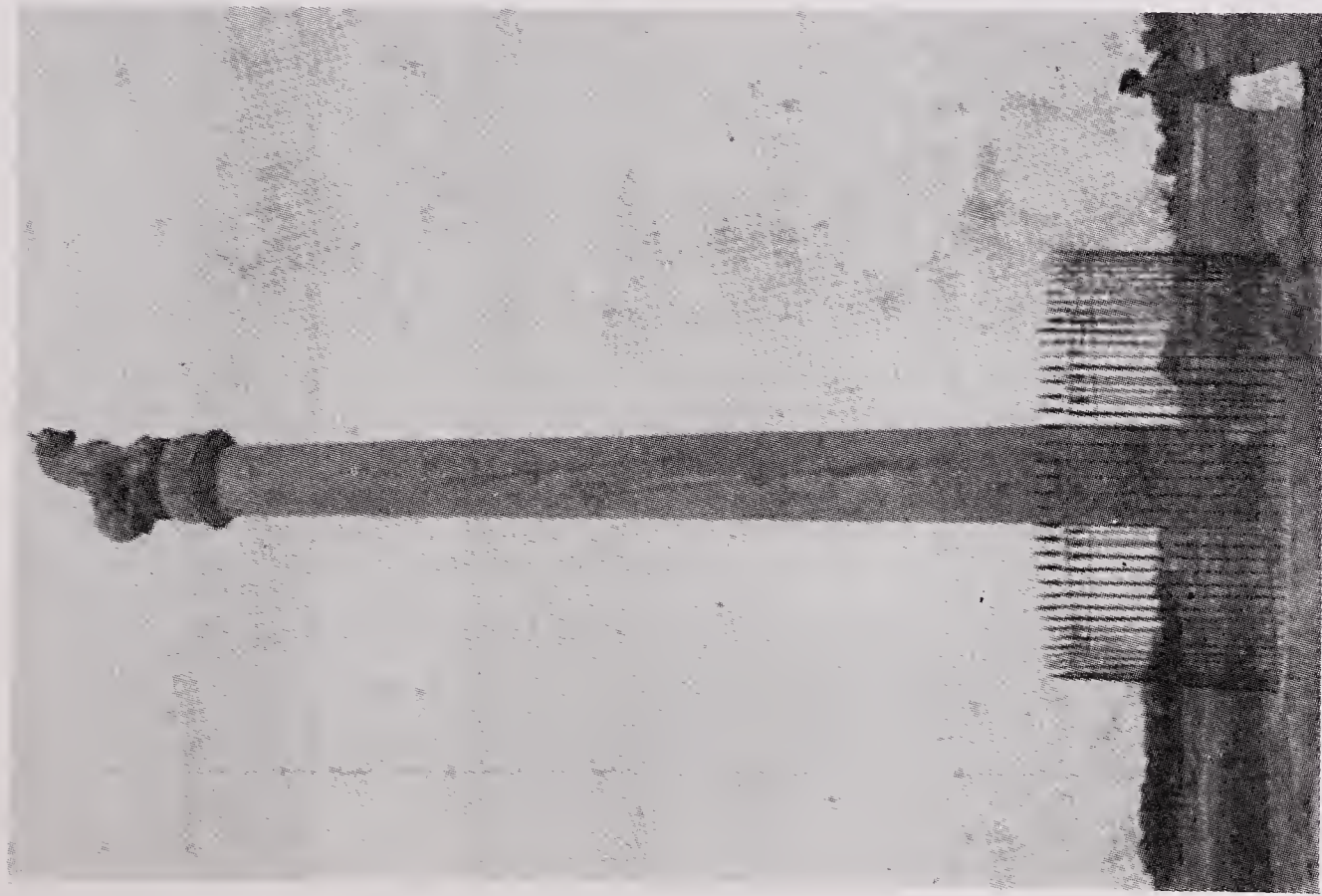
C

D



A, Kumrahar (Patna) : terracotta head; B, Rupar : carved stone disk; C, Sisupalgarh : clay bulla; D, Arikamedu : stamped Arretine ware. See pp. 65, 48, 82 and 84

PLATE XVII

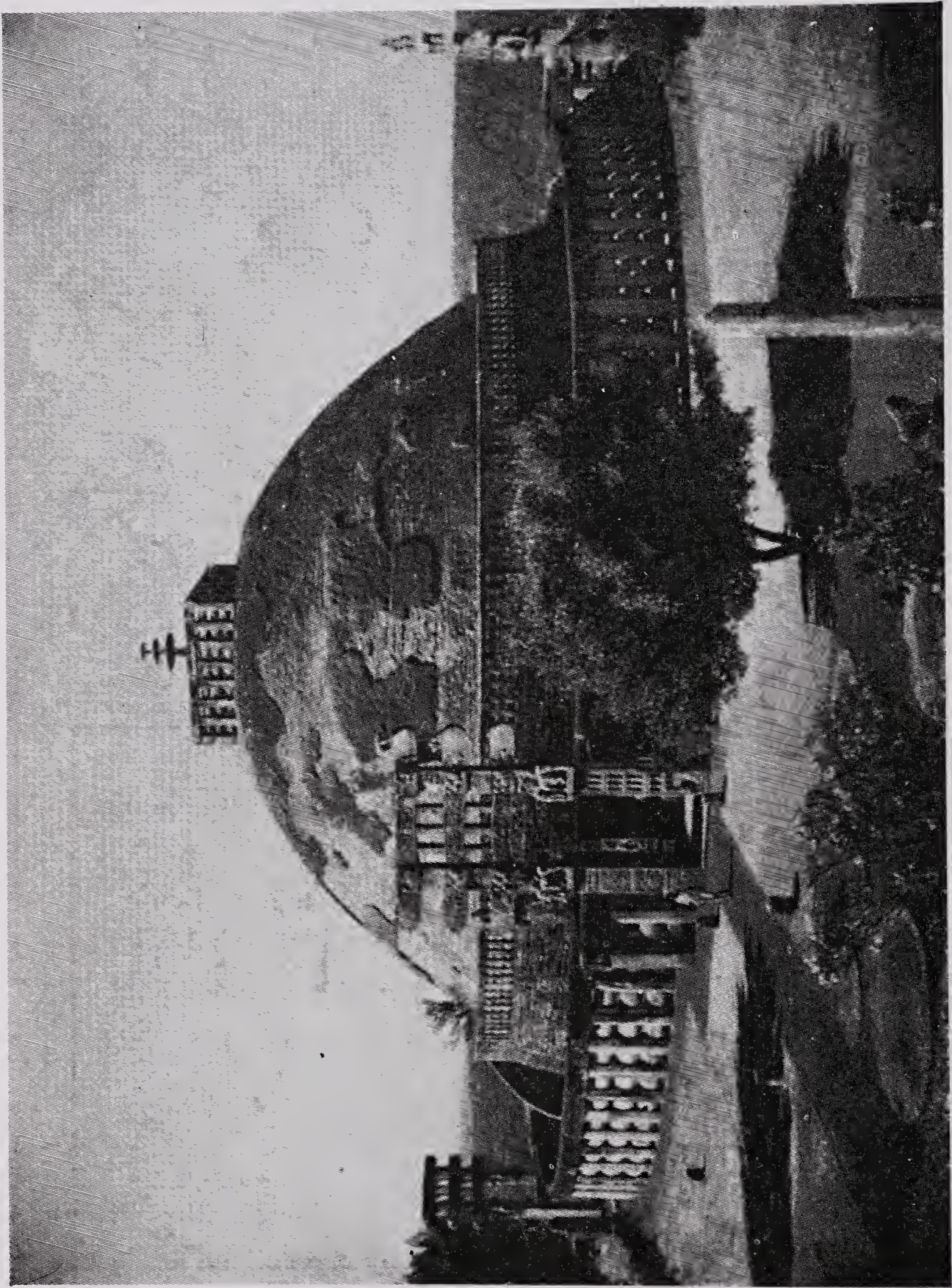


A

B

A, Lauriya-Nandangarh: column of Aśoka; B, Piprahwa: inscribed relic-casket. See pp. 87-88

PLATE XVIII



Sanchi: Stūpa 1. See p. 90



Sanchi : gateway. See p. 91

PLATE XX



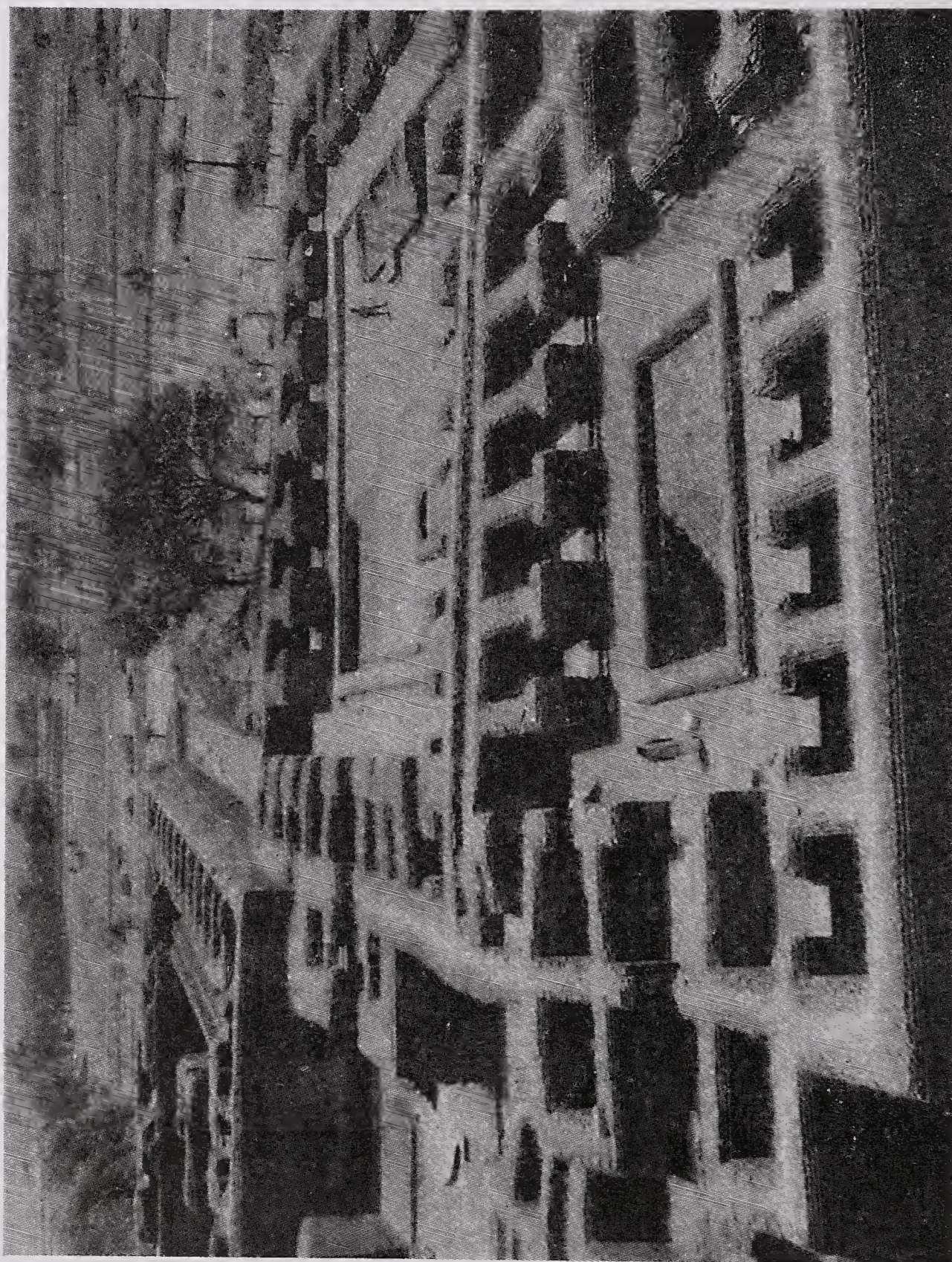
Sarnath : Dhamekh Stūpa. See p. 92

PLATE XXI

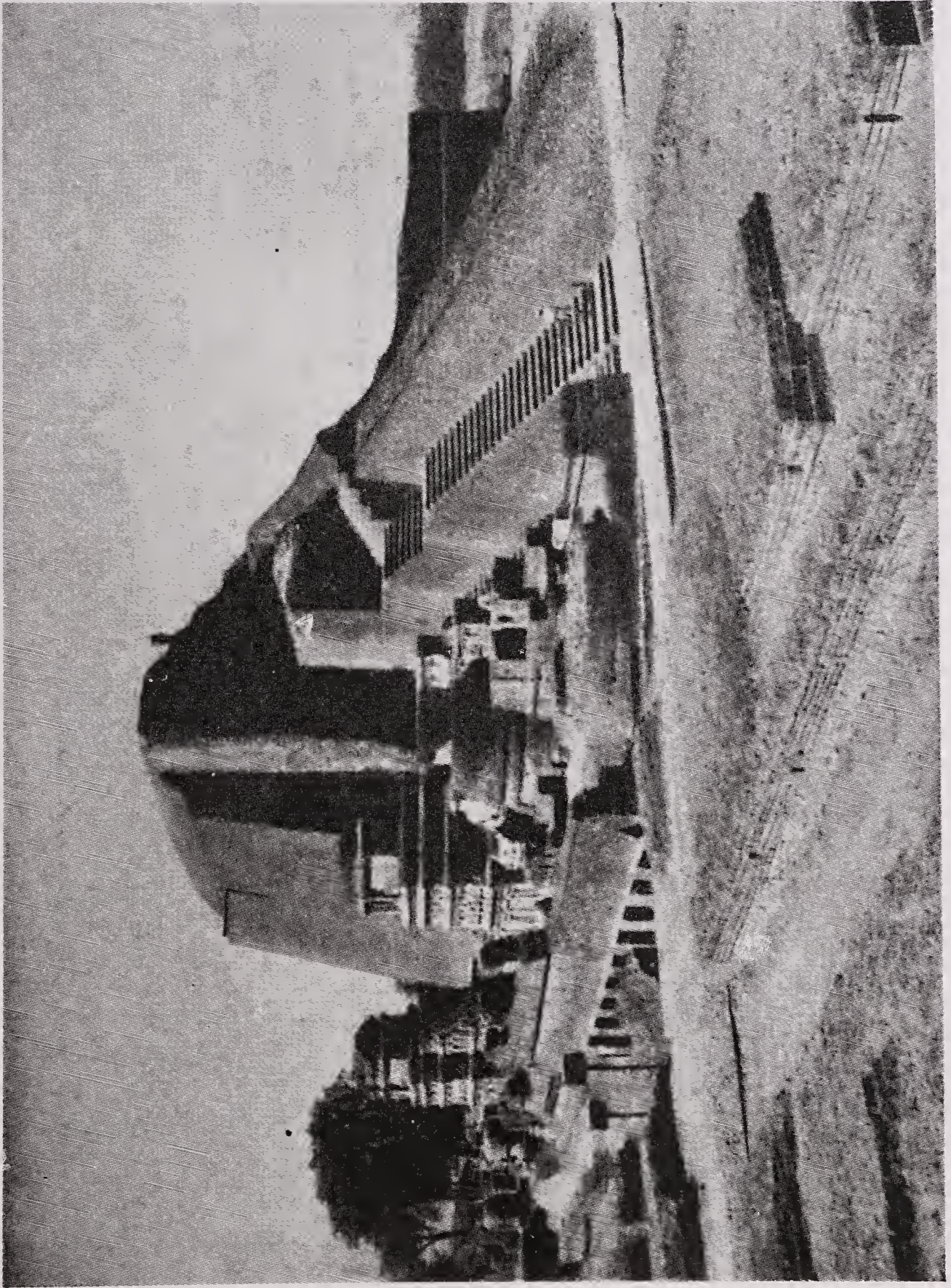


Bodh-Gaya: Mahābodhi temple. See p. 94

PLATE XXII

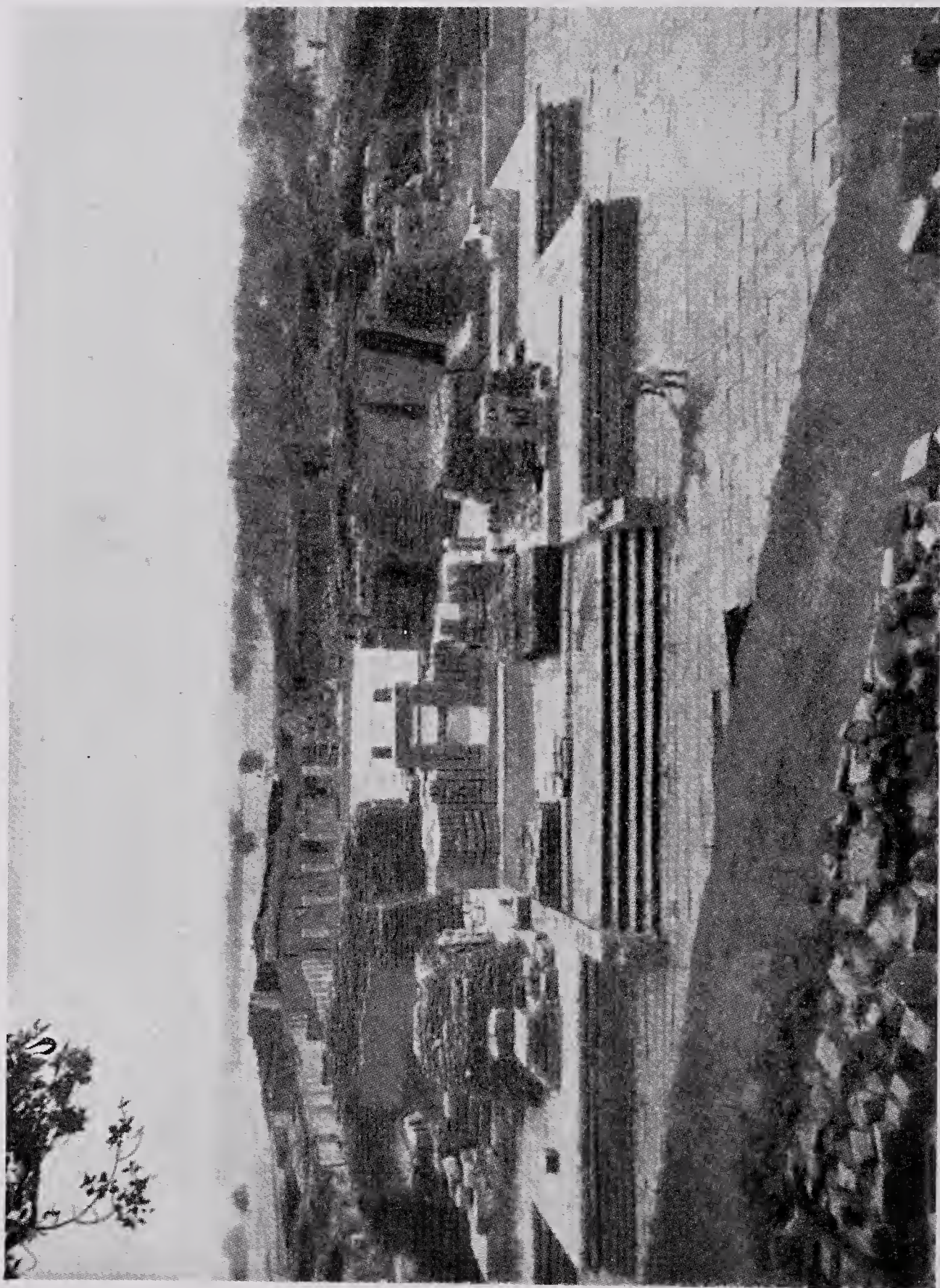


Nālandā: monasteries. See p. 95

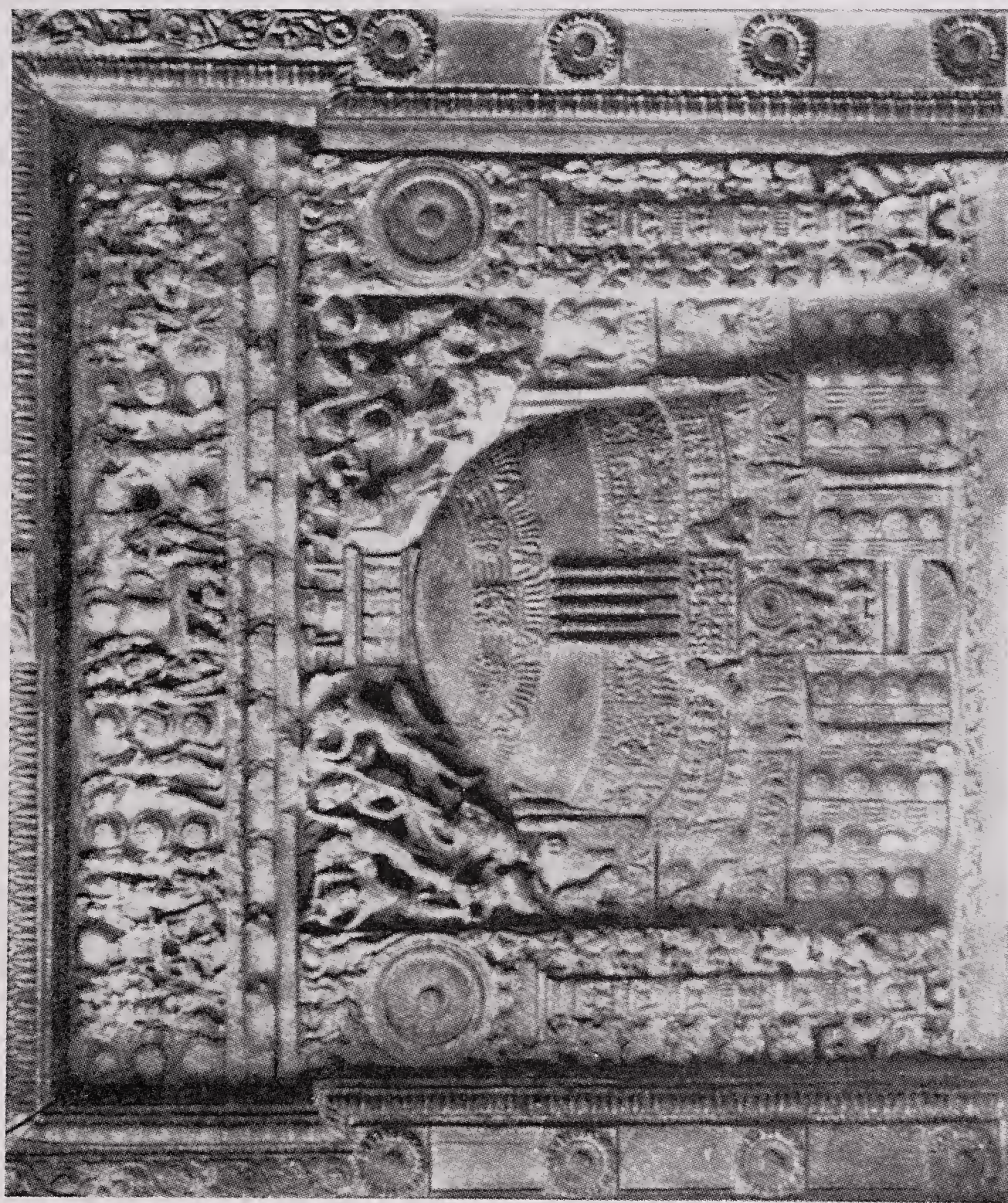


Nālandā: Temple 3. See p. 95

PLATE XXIV

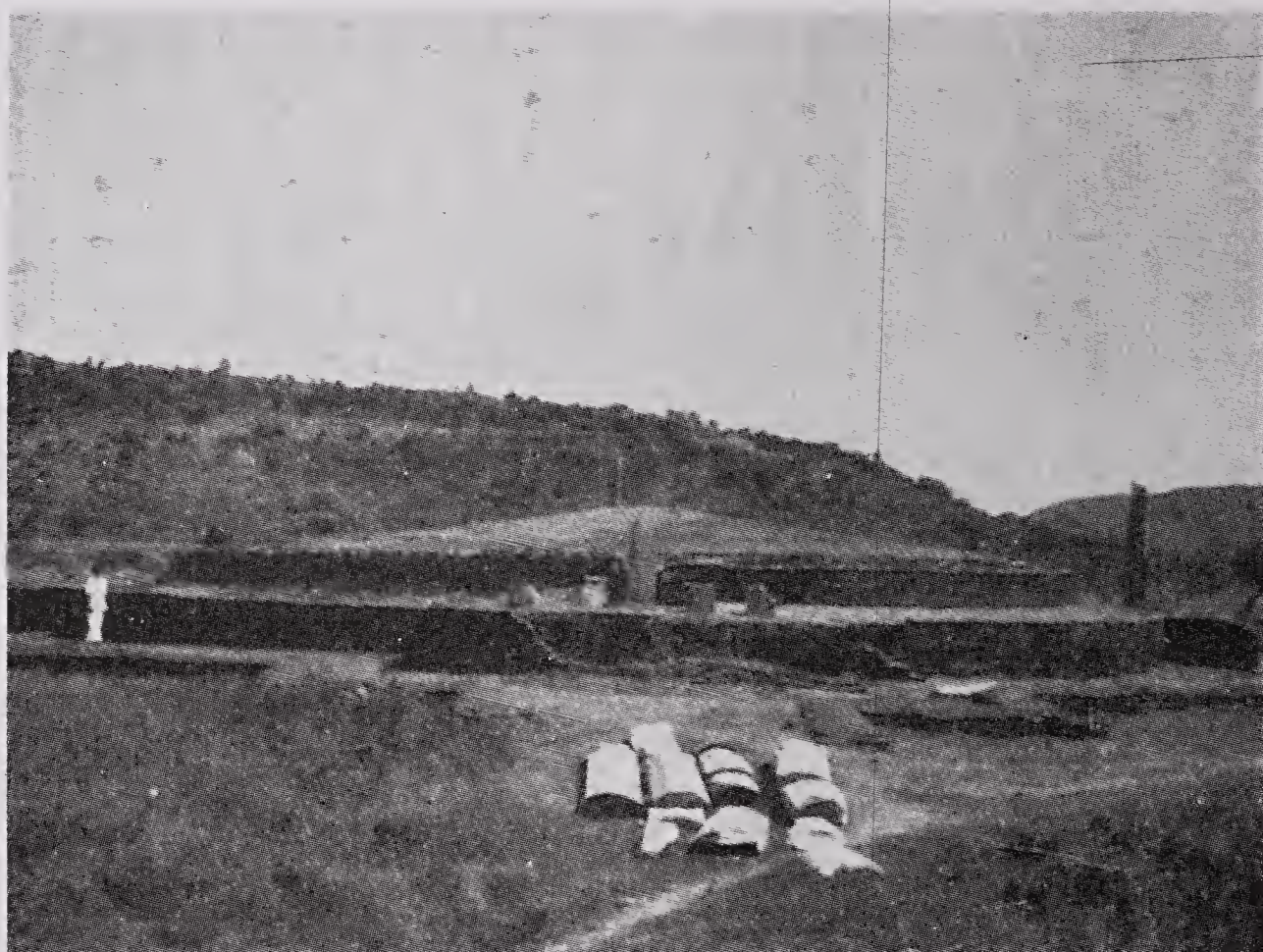


Ratnagiri: monastery. See p. 97



Amaravati: decorated drum-slab with stupa-representation. See p. 105

PLATE XXVI



A



B

*Nagarjunakonda: A, Mahāstūpa, and B, stūpa-base with ten spokes.
See pp. 105 and 6*



A



B

Nagarjunakonda: A, monastery with stūpa in background, and, B, reconstructed chaitya-griha with Buddha figure of same complex. See p. 107

PLATE XXVIII



A



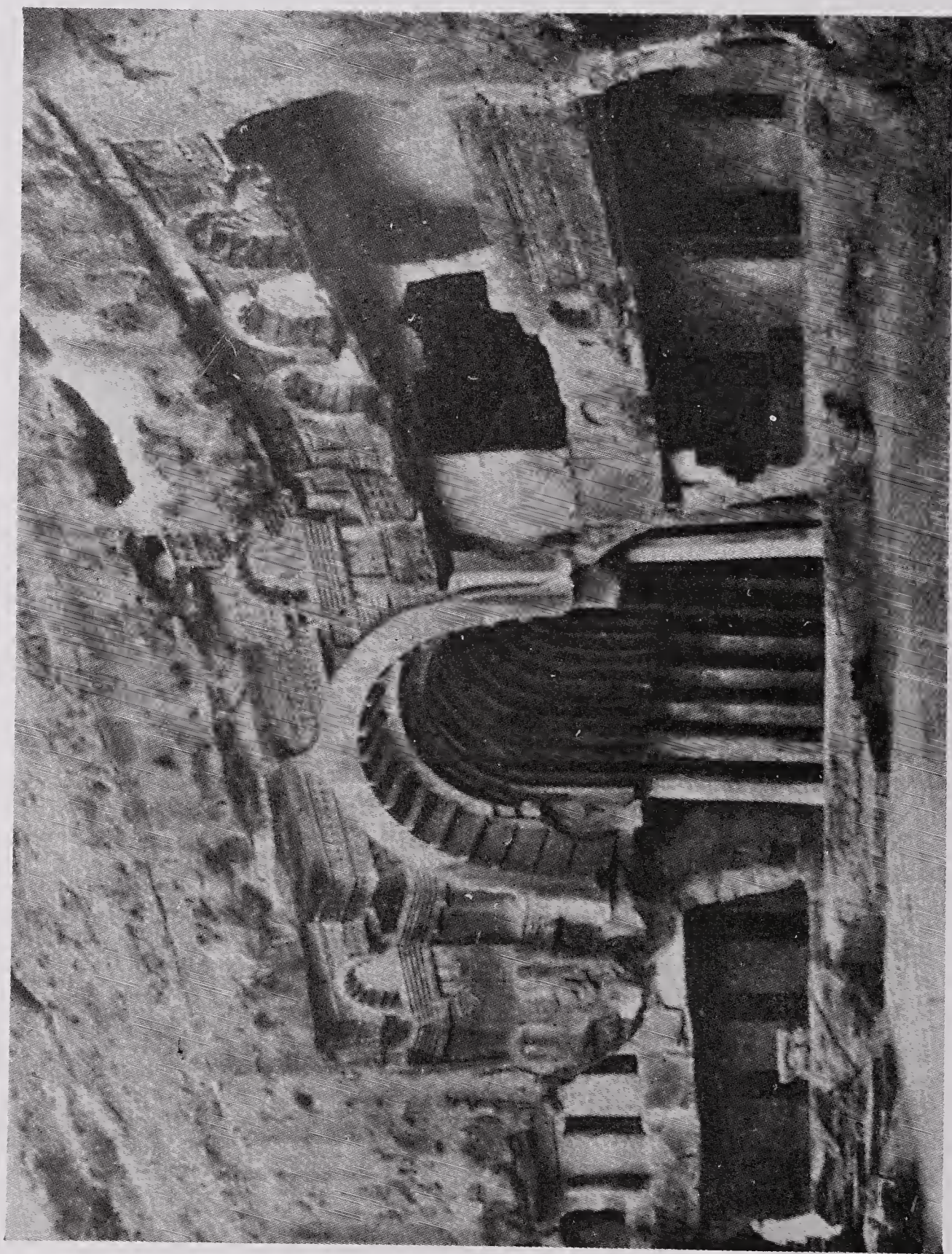
B

Salihundam : A, circular chaitya-griha, votive-stūpas and spoked stūpa-base, and B, main circular chaitya-griha. See p. 108

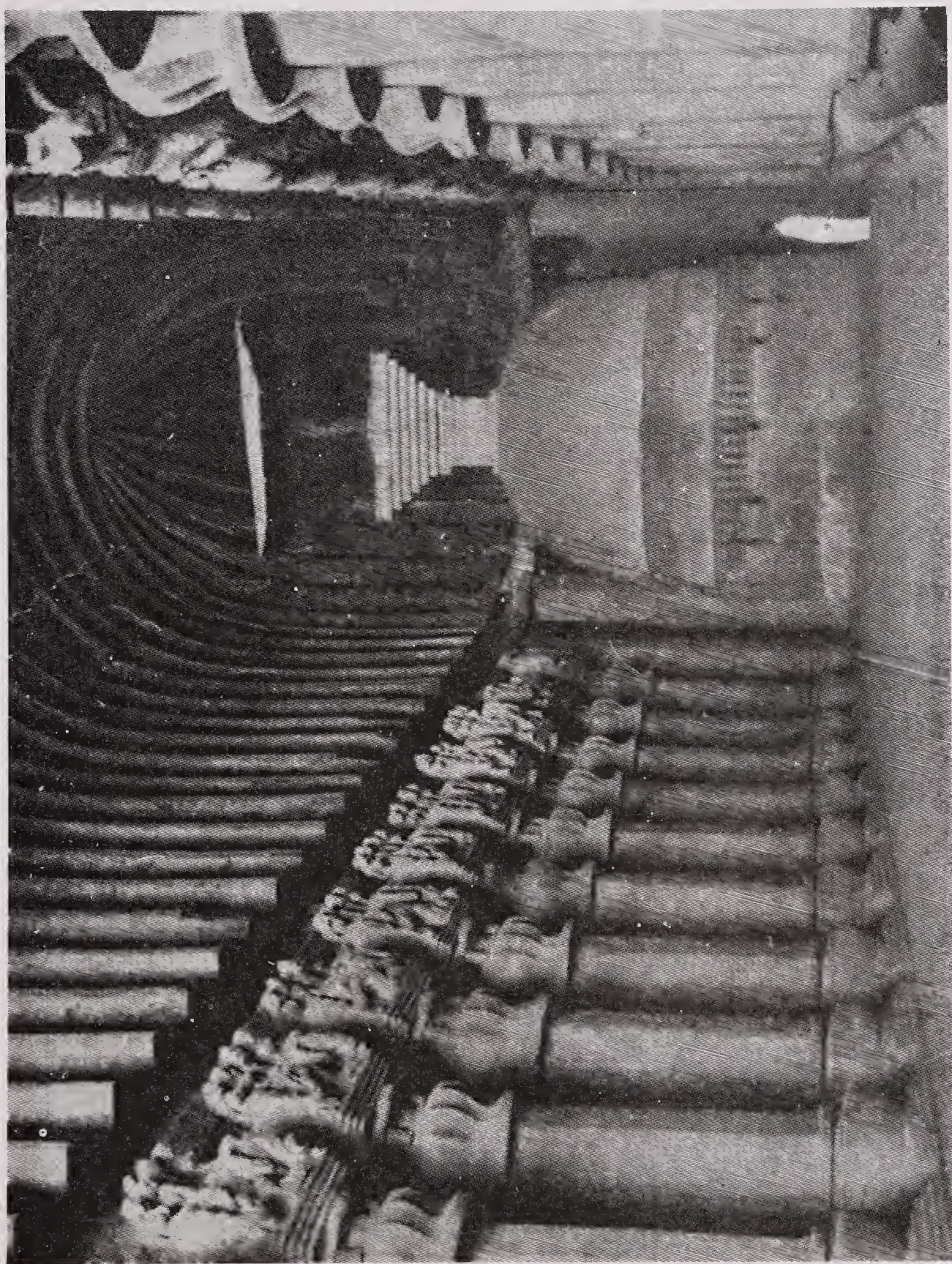


Barabar : Lomās-rishi cave. See p. 111

PLATE XXX



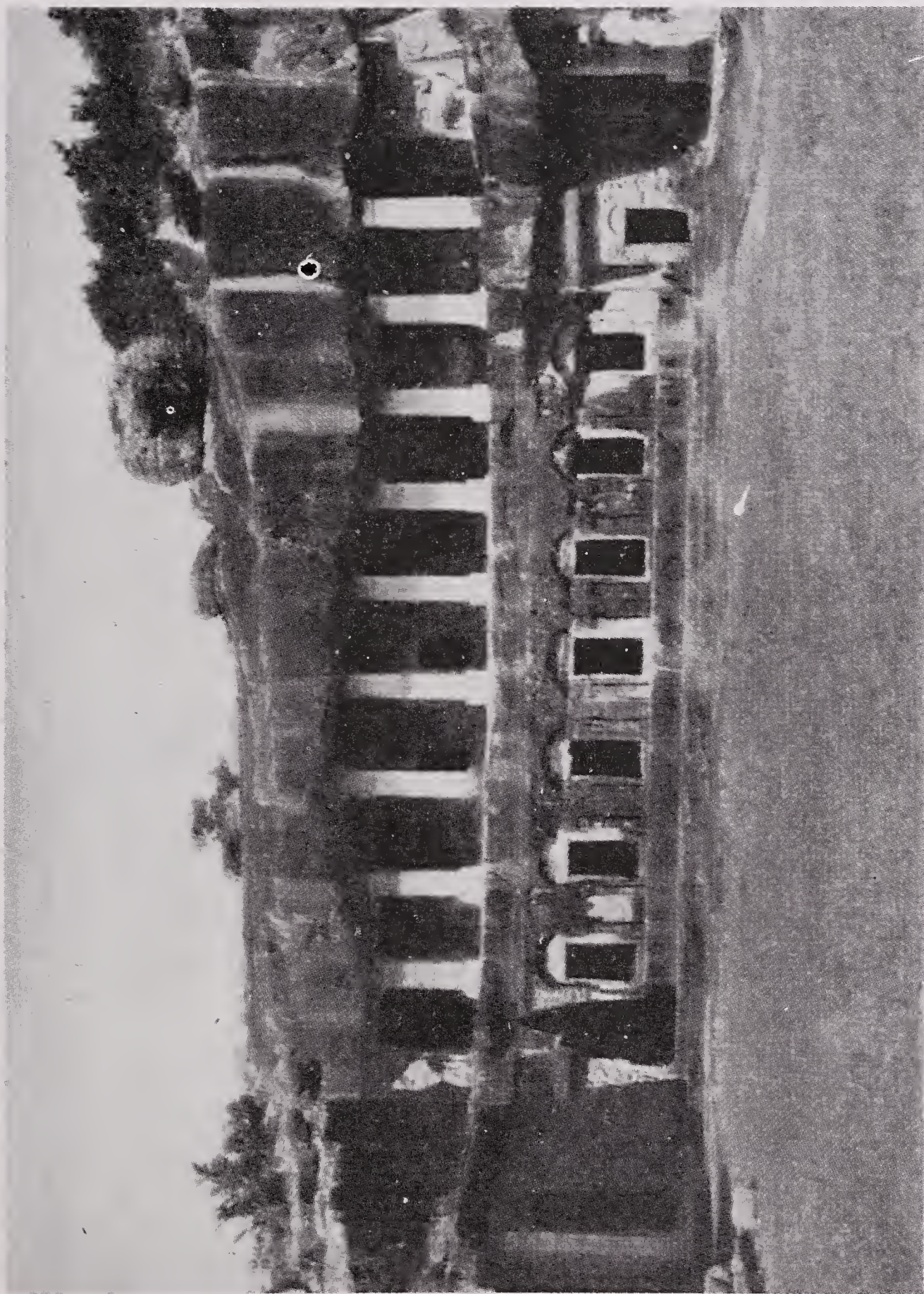
Bhaja : rock-cut chaitya-hall, front view. See p. 114



Karle : rock-cut chaitya-hall, interior view. See p. 116

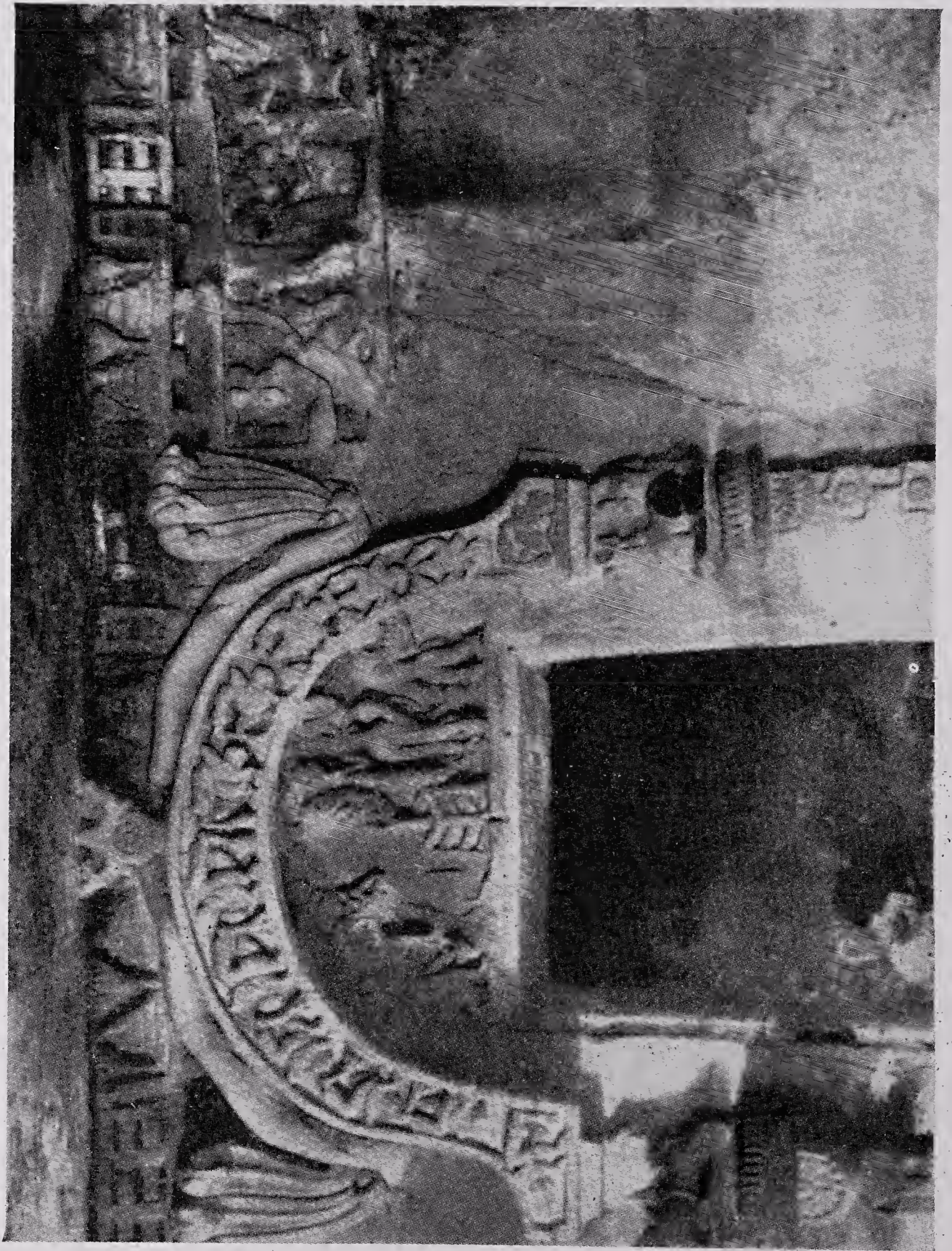


Nasik : rock-cut vihāra. See p. 119.

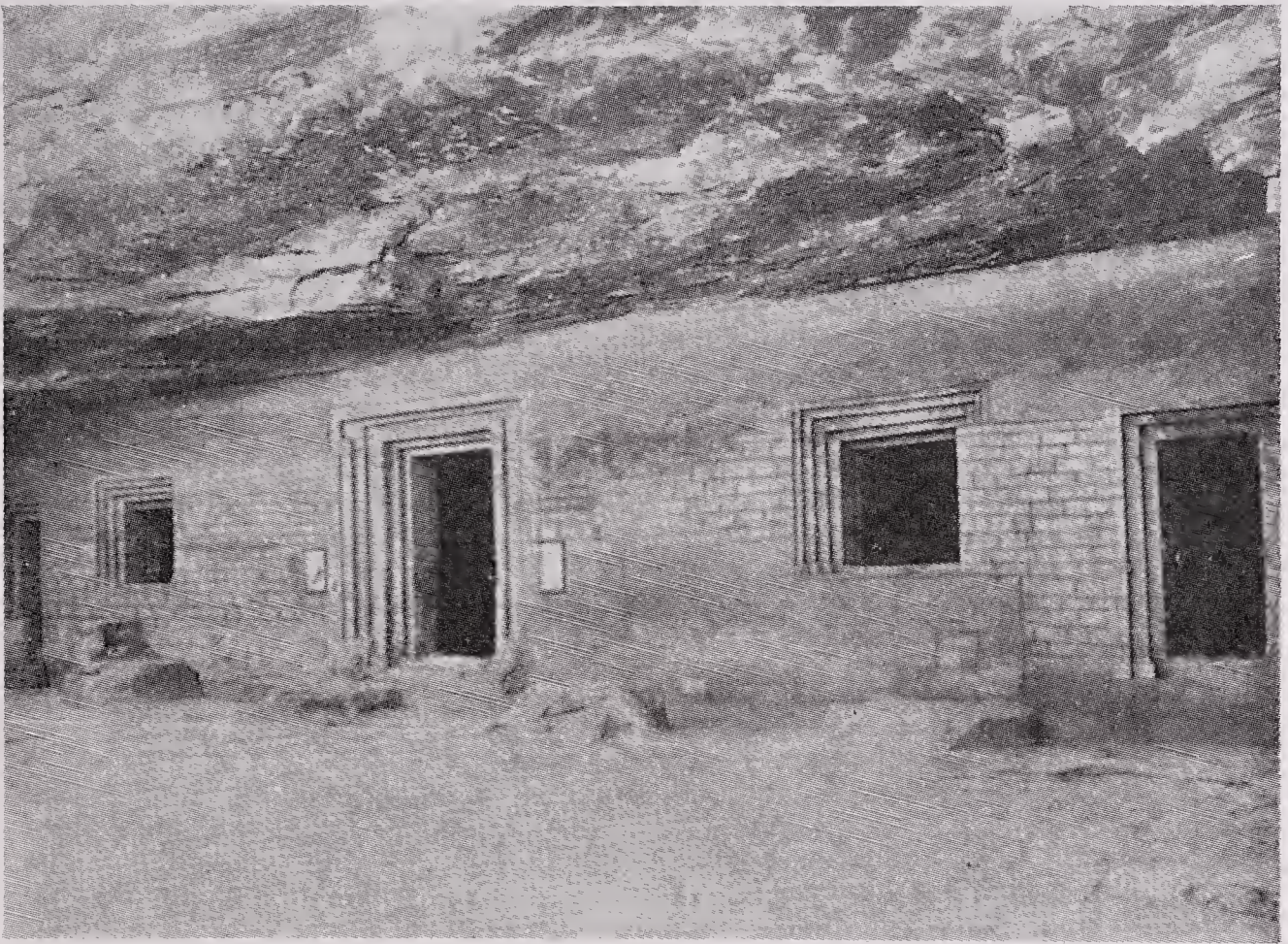


Udayagiri : Cave 1, Rani-gumpha. See p. 122

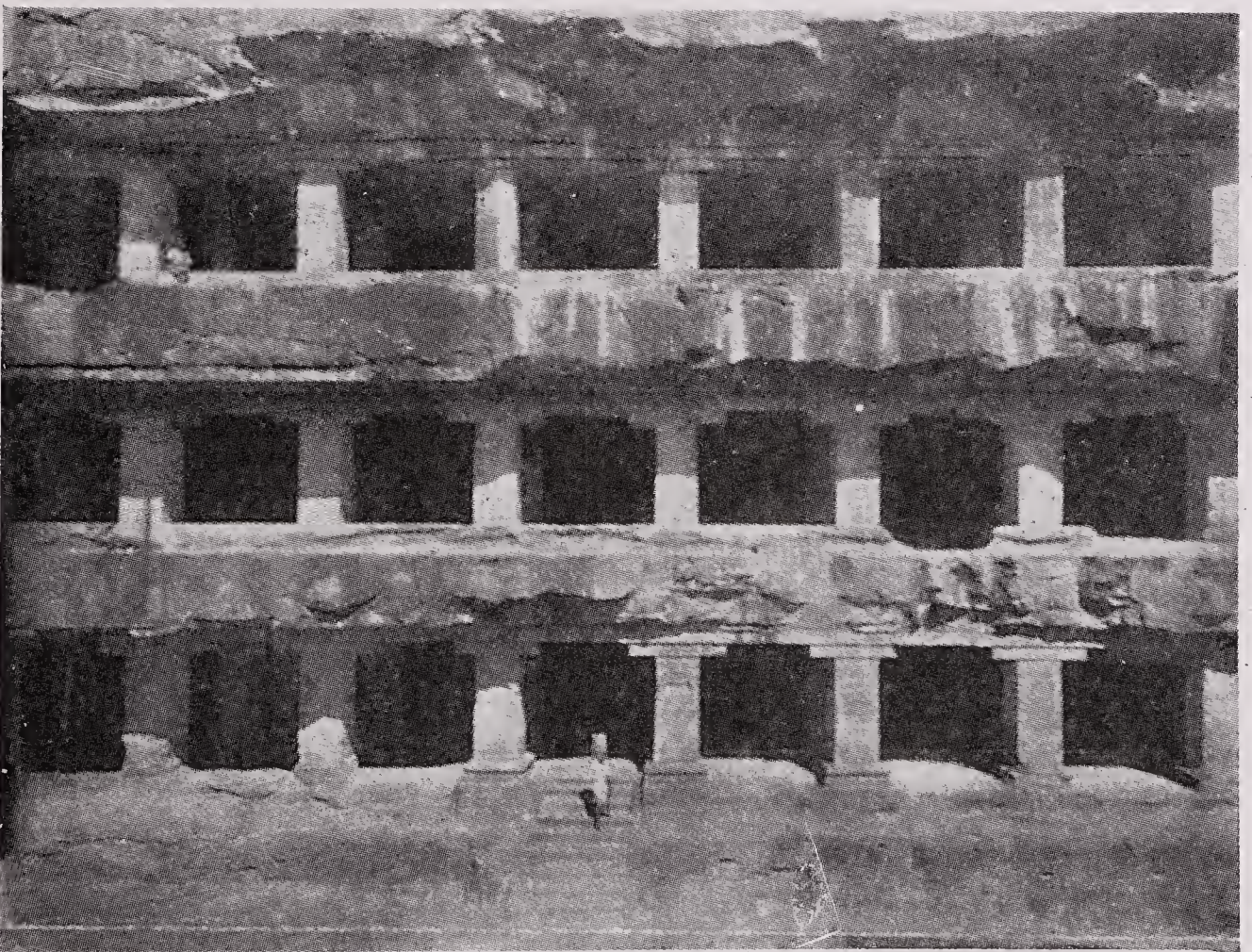
PLATE XXXIV



Khandagiri : Cave 3, Ananta-gumphā. See p. 123



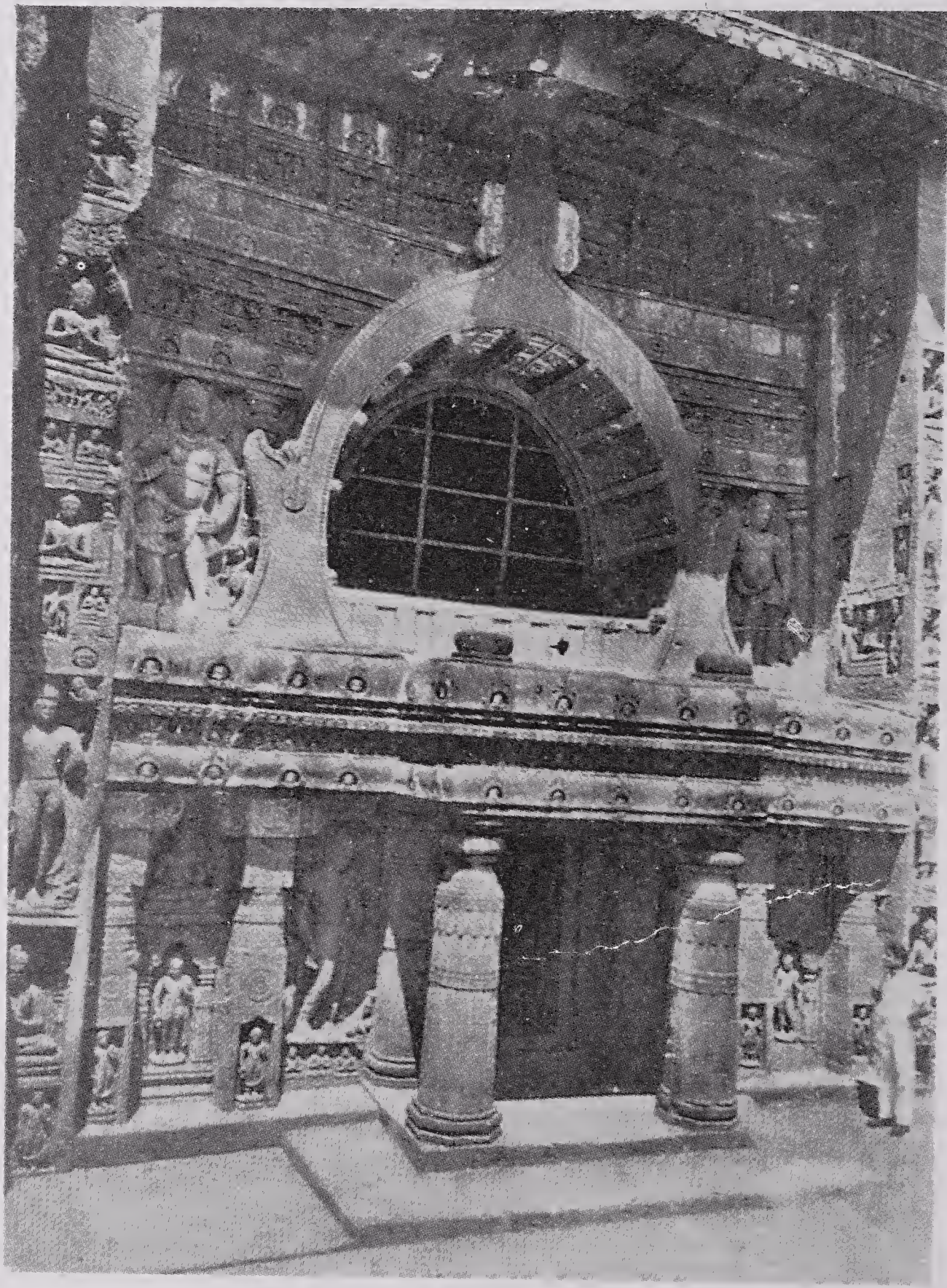
A



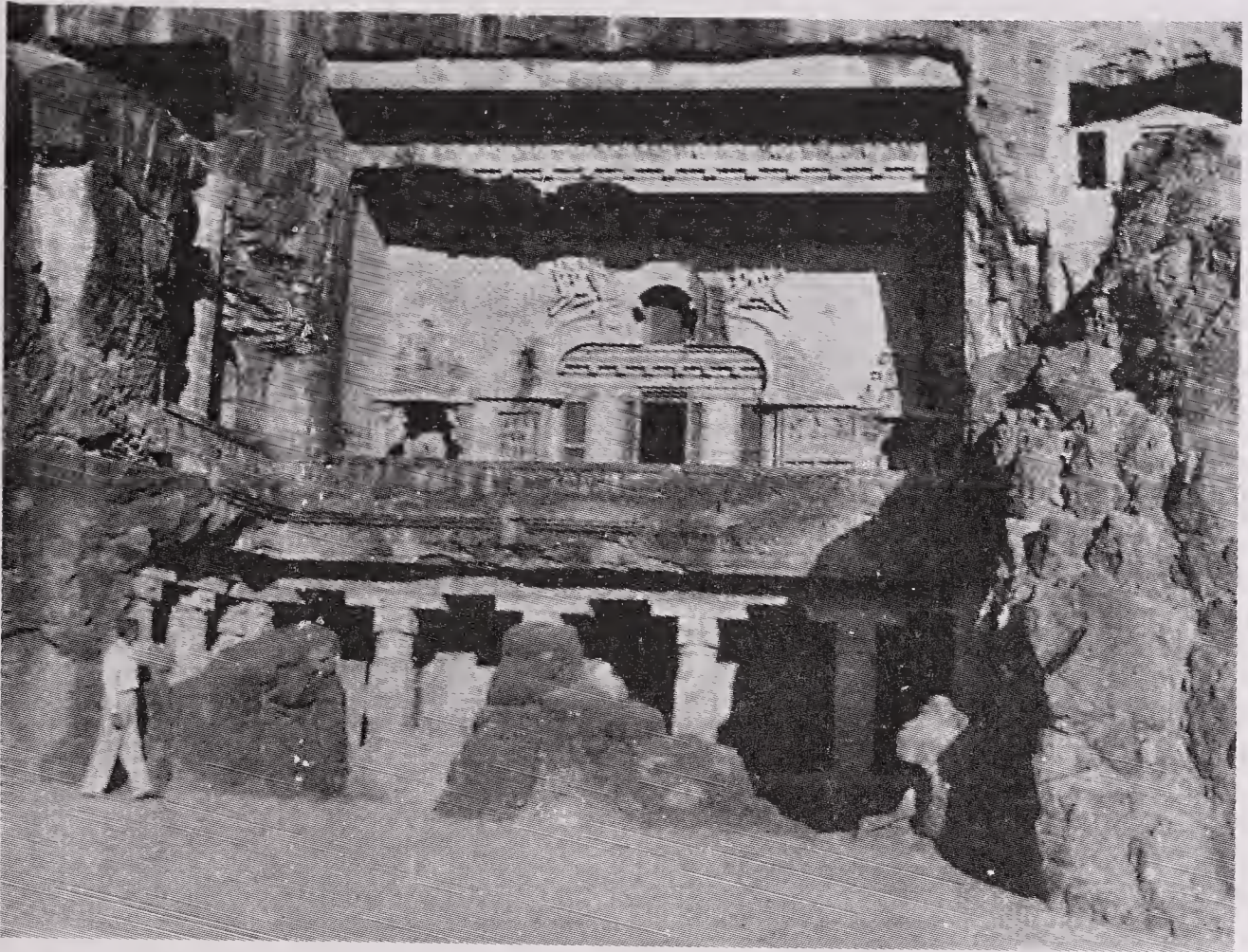
A, Bagh : rock-cut vihāra; B, Ellora : Cave 12, three-storeyed vihāra. See pp. 124 and 129

B

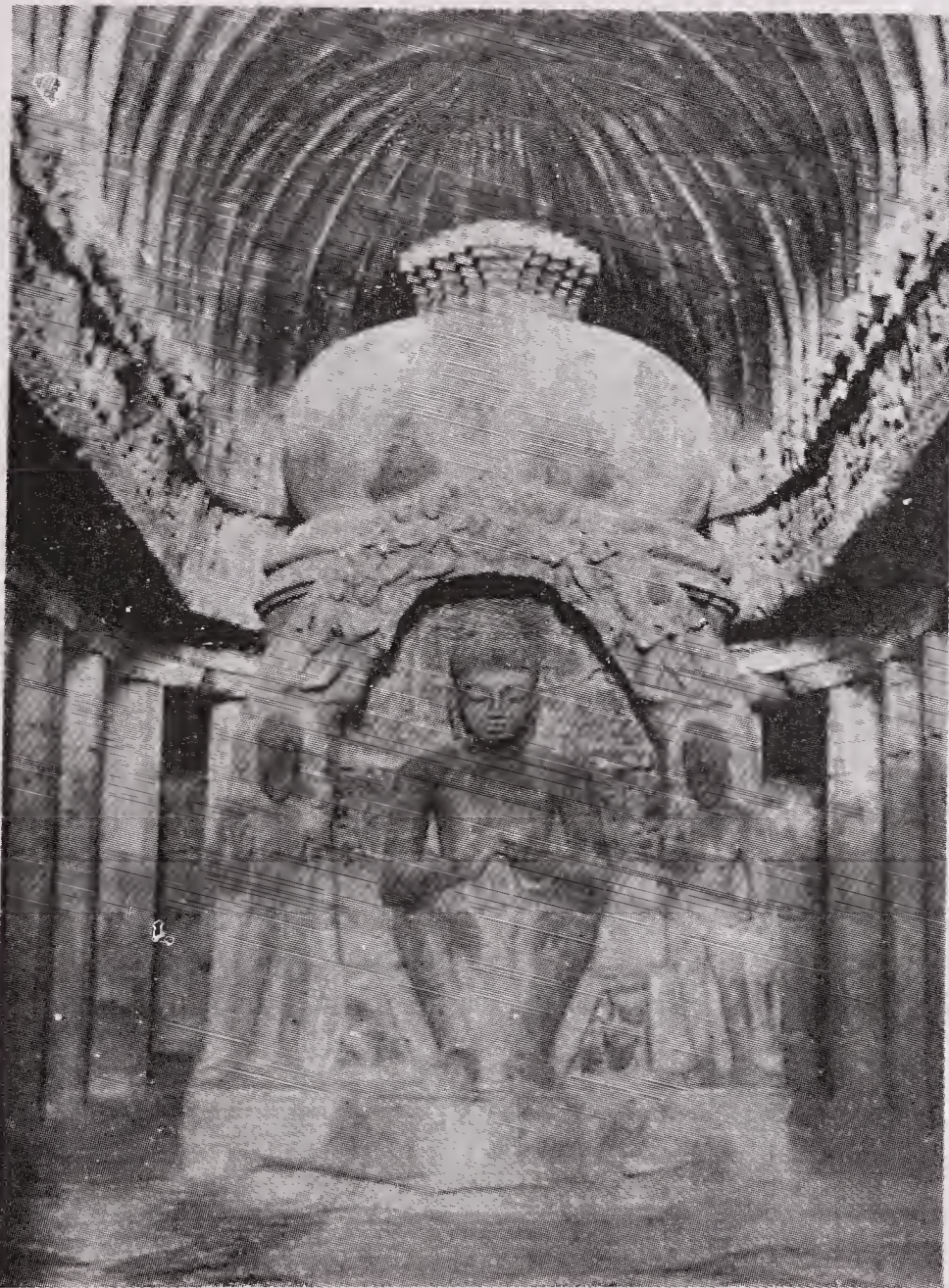
PLATE XXXVI



Ajanta : Cave 19, front view. See p. 125.



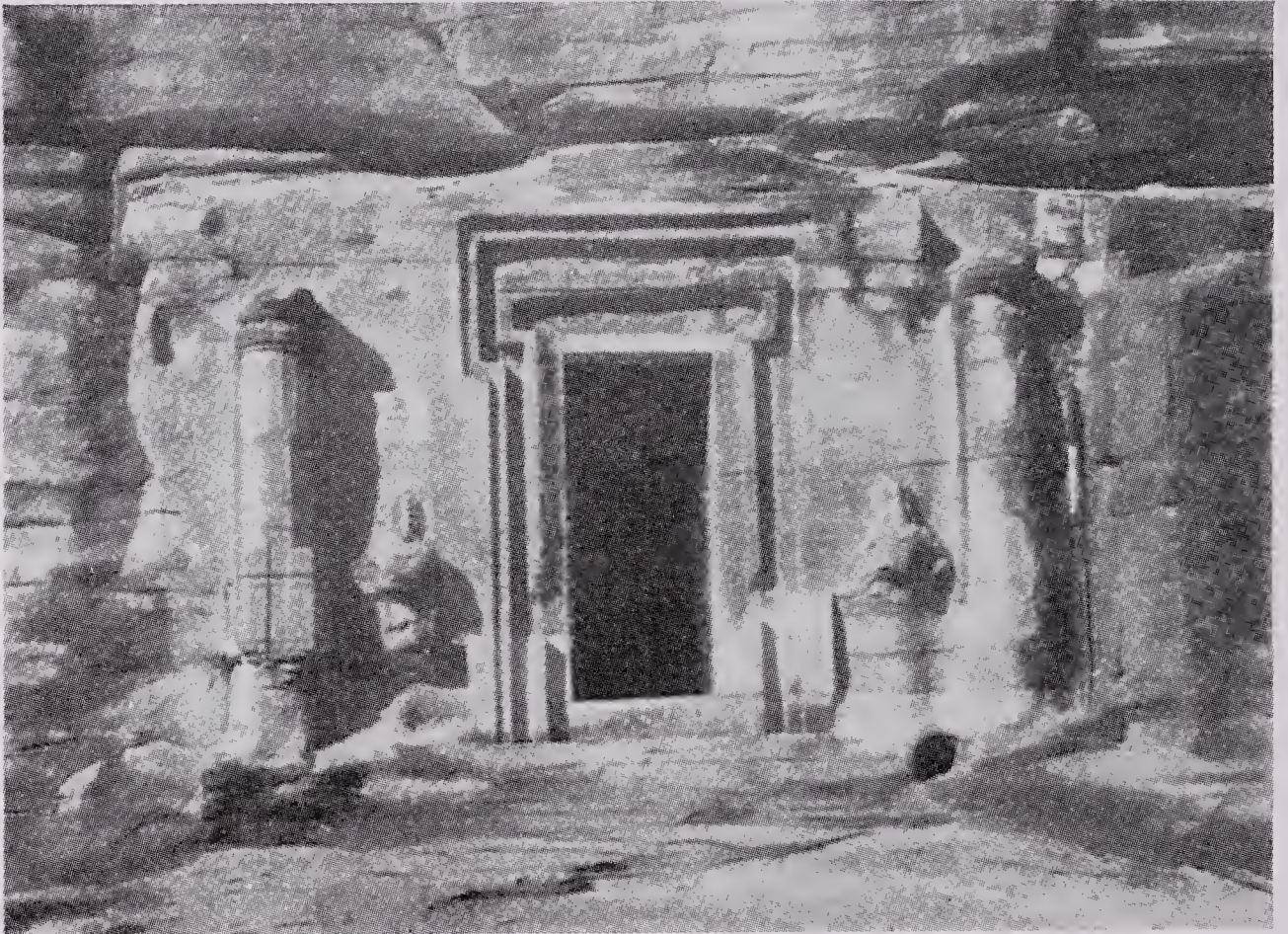
A



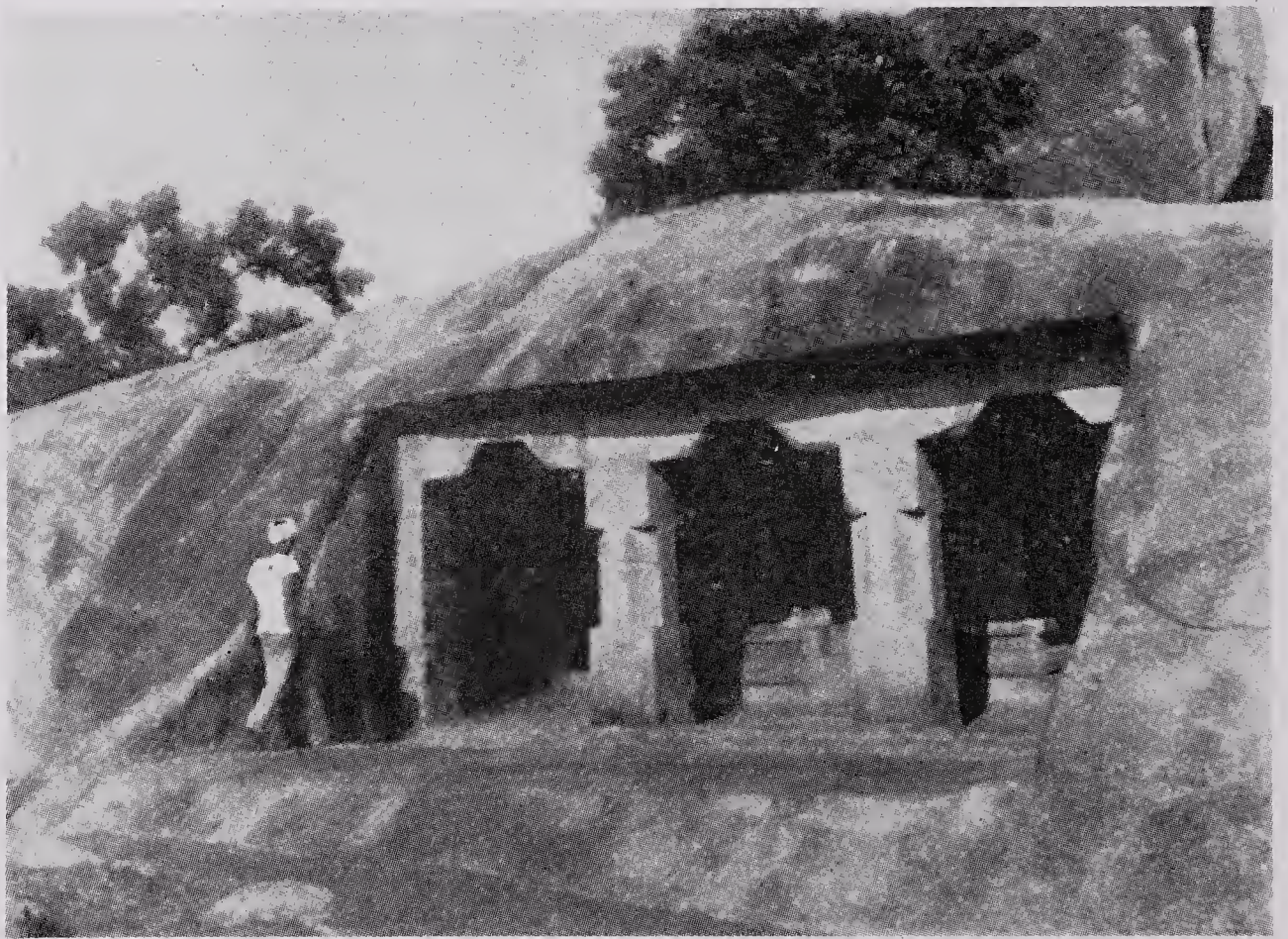
B

Ellora : A, Cave 10, front view and B, stūpa with Buddha figure inside See p. 126

PLATE XXXVIII



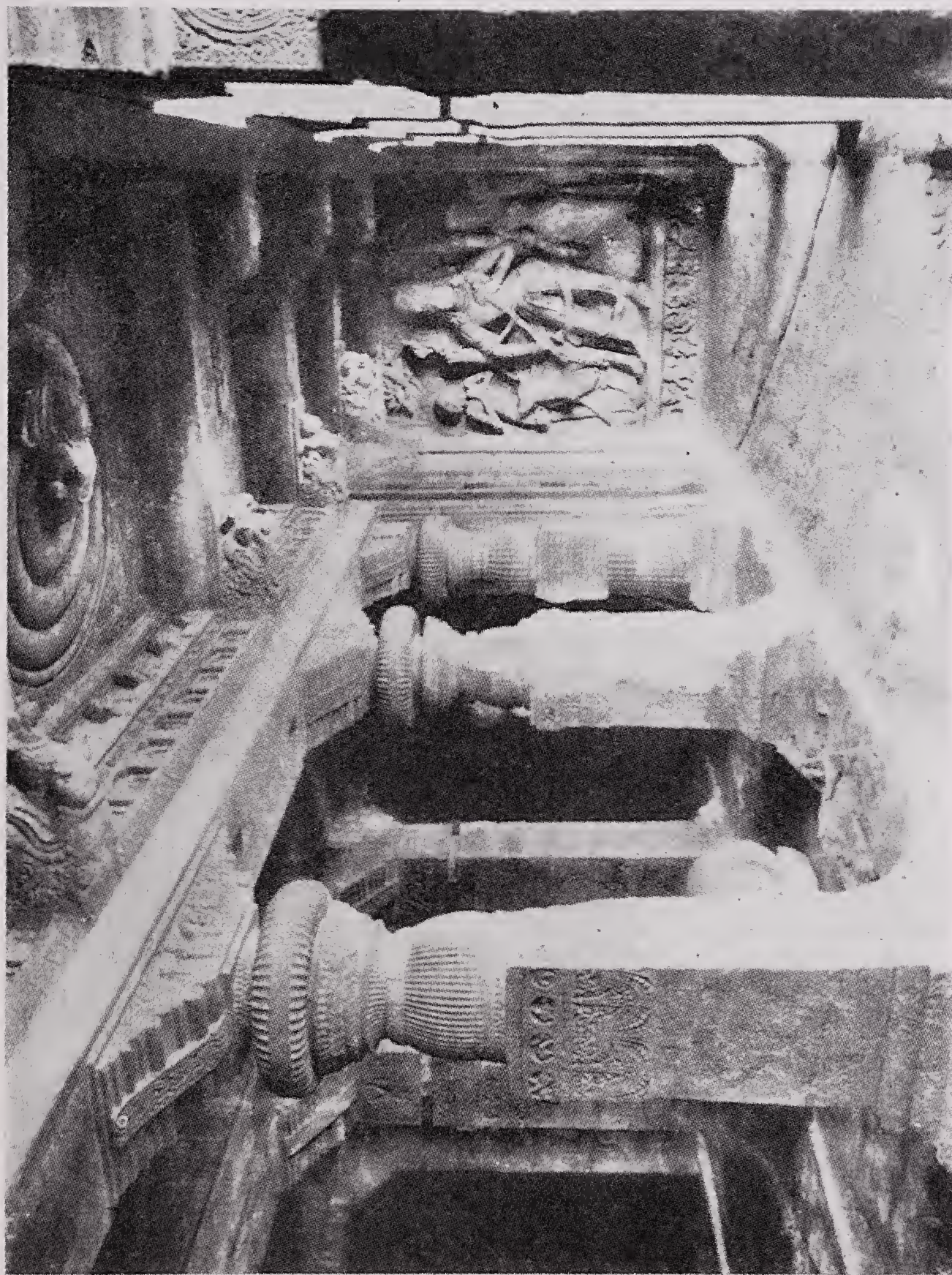
A



A, Udaigiri : cave-temple ; B, Mahabalipuram: Kotikal
mandapam. cave-temple. See pp. 130 and 143

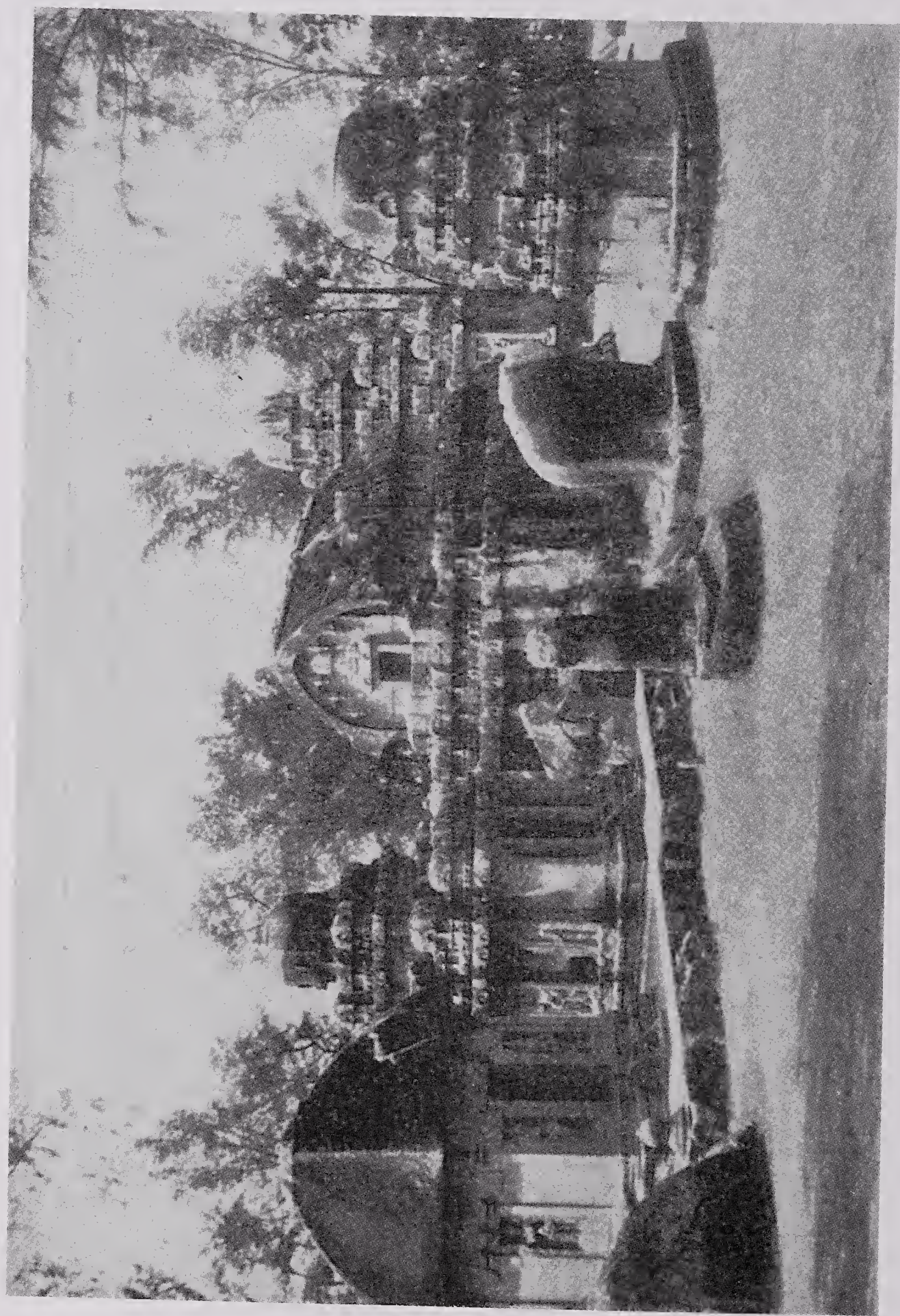
B

PLATE XXXIX



Badami : Cave 1 with image of Vishnu. See p. 132

PLATE XLII

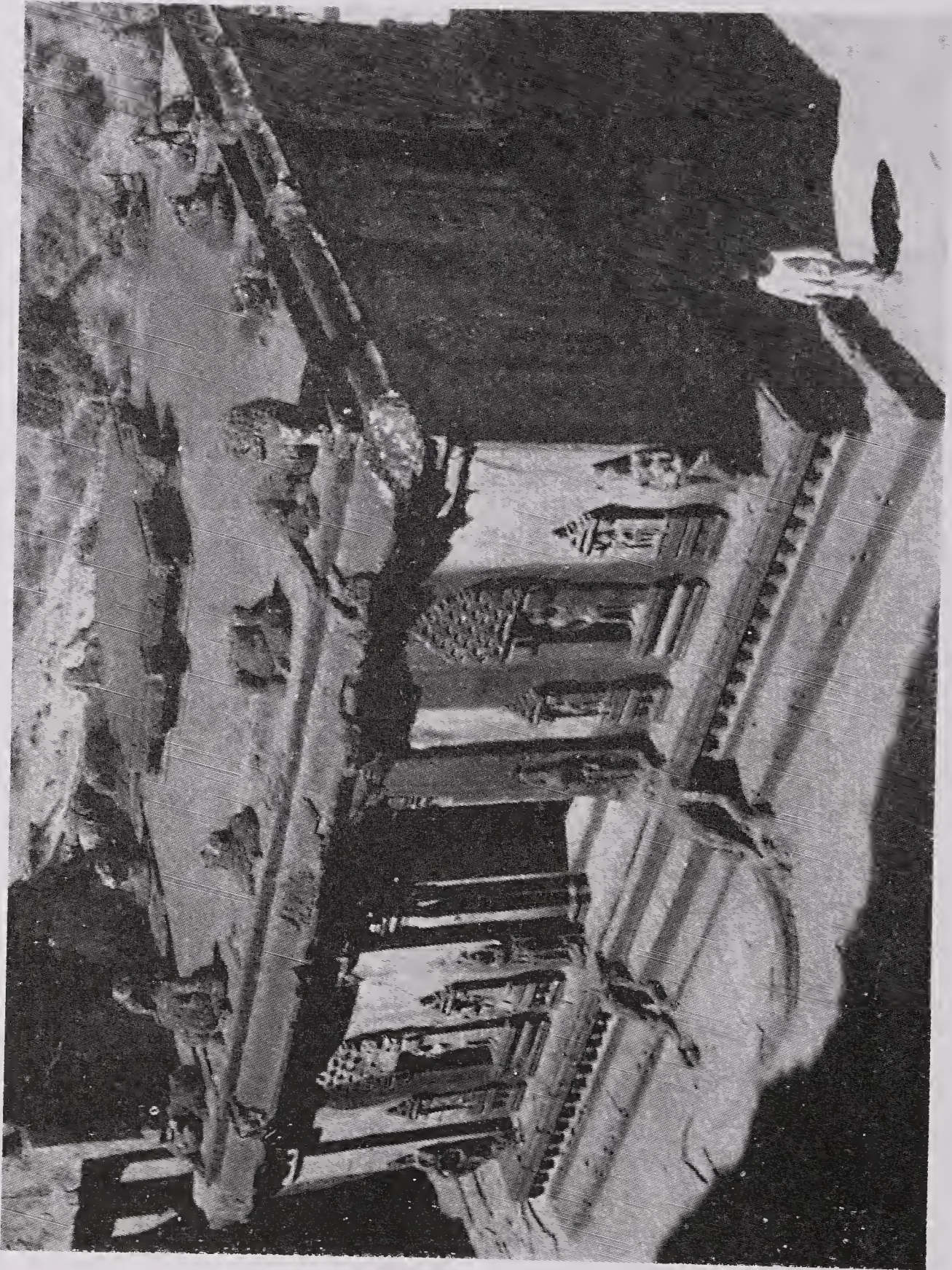


Mahabalipuram : five monolithic rathas. See pp. 143 and 148

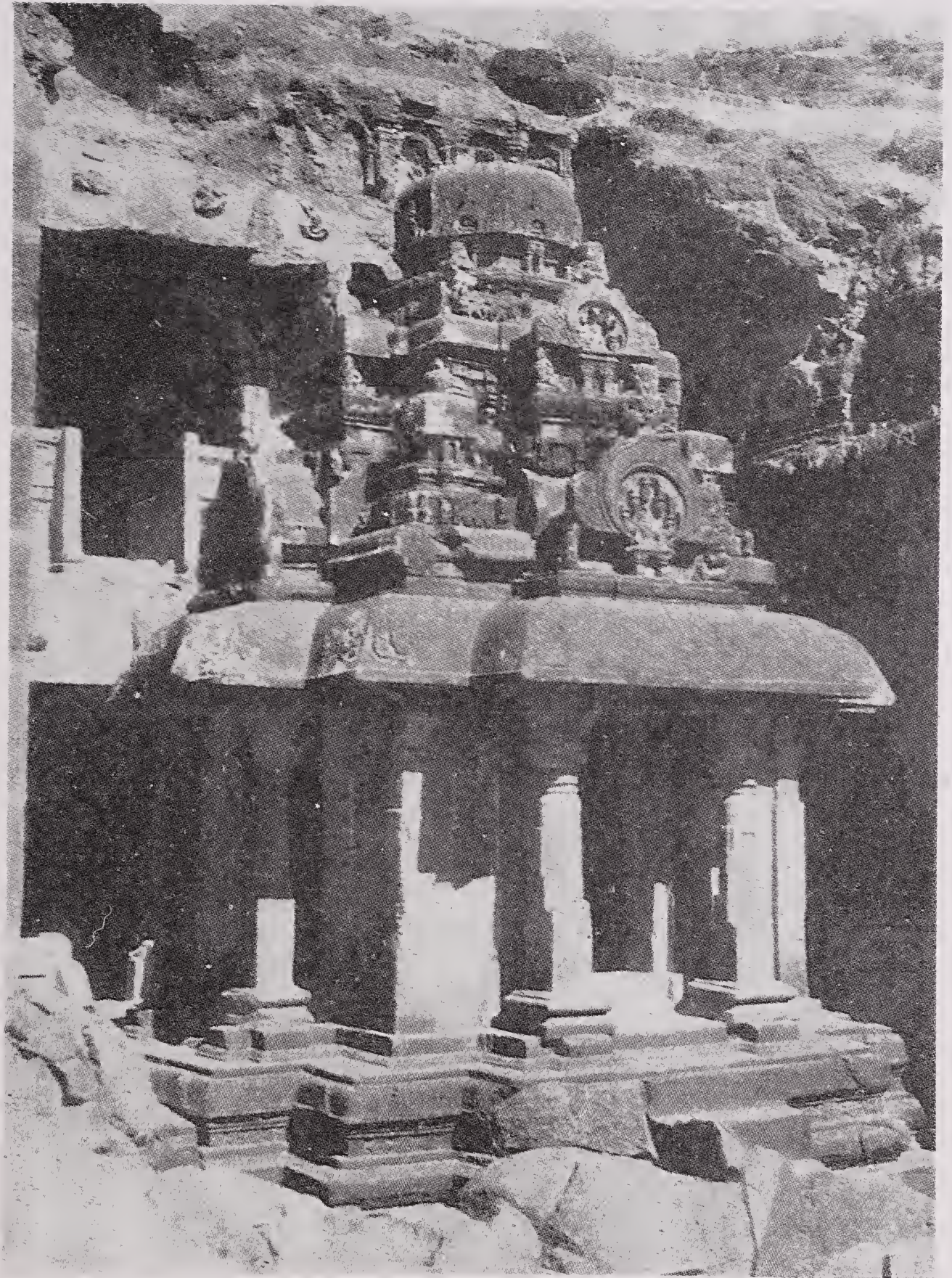


Ellora : Kailāsa temple. See p. 151

PLATE XLIV

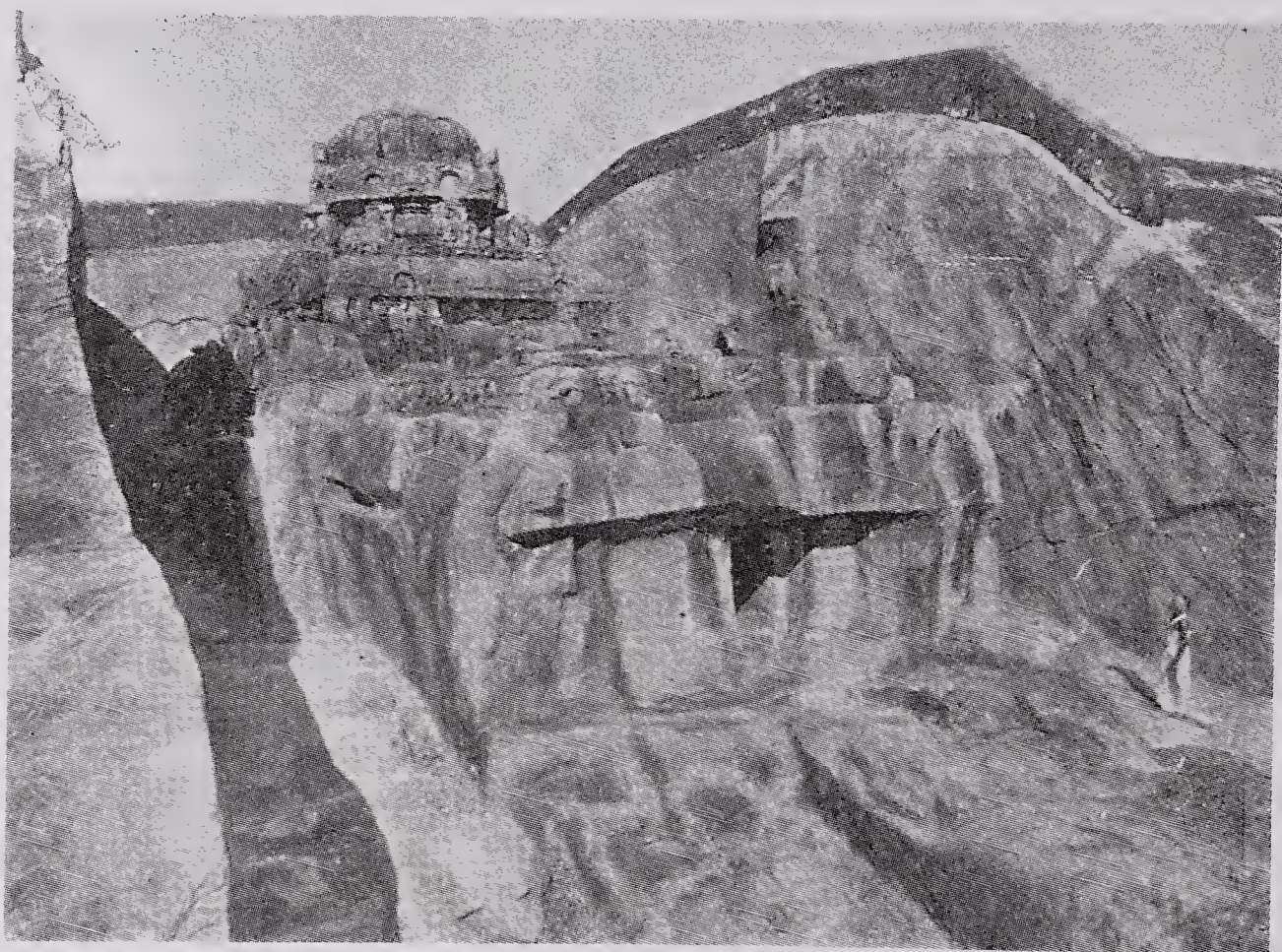


Ellora : Cave 15, *Daśavatāra, nandi-maṇḍapa*. See pp. 134 and 152

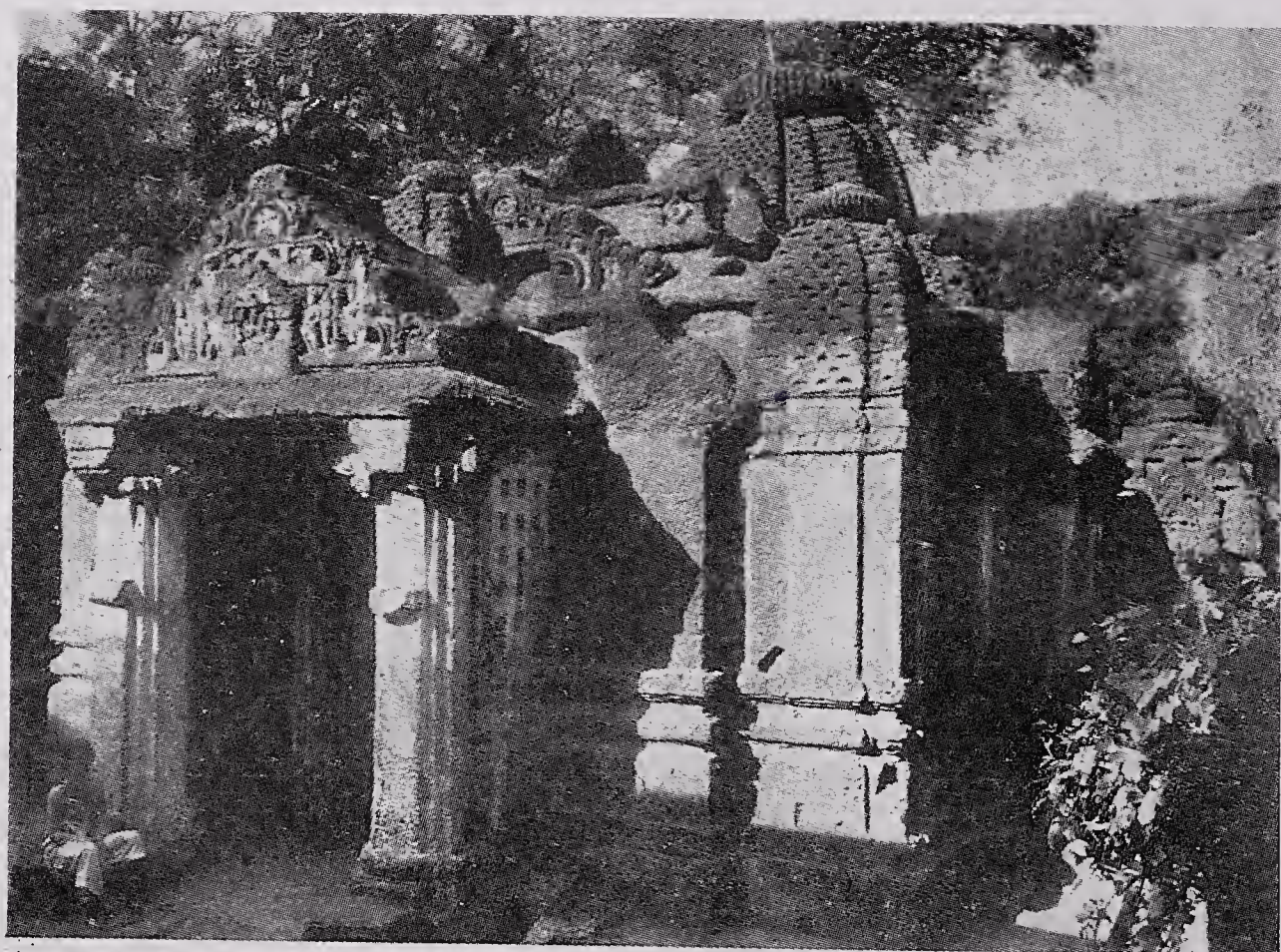


Ellora : Cave 33, Indrasabhā. See pp. 136 and 152

PLATE XLVI



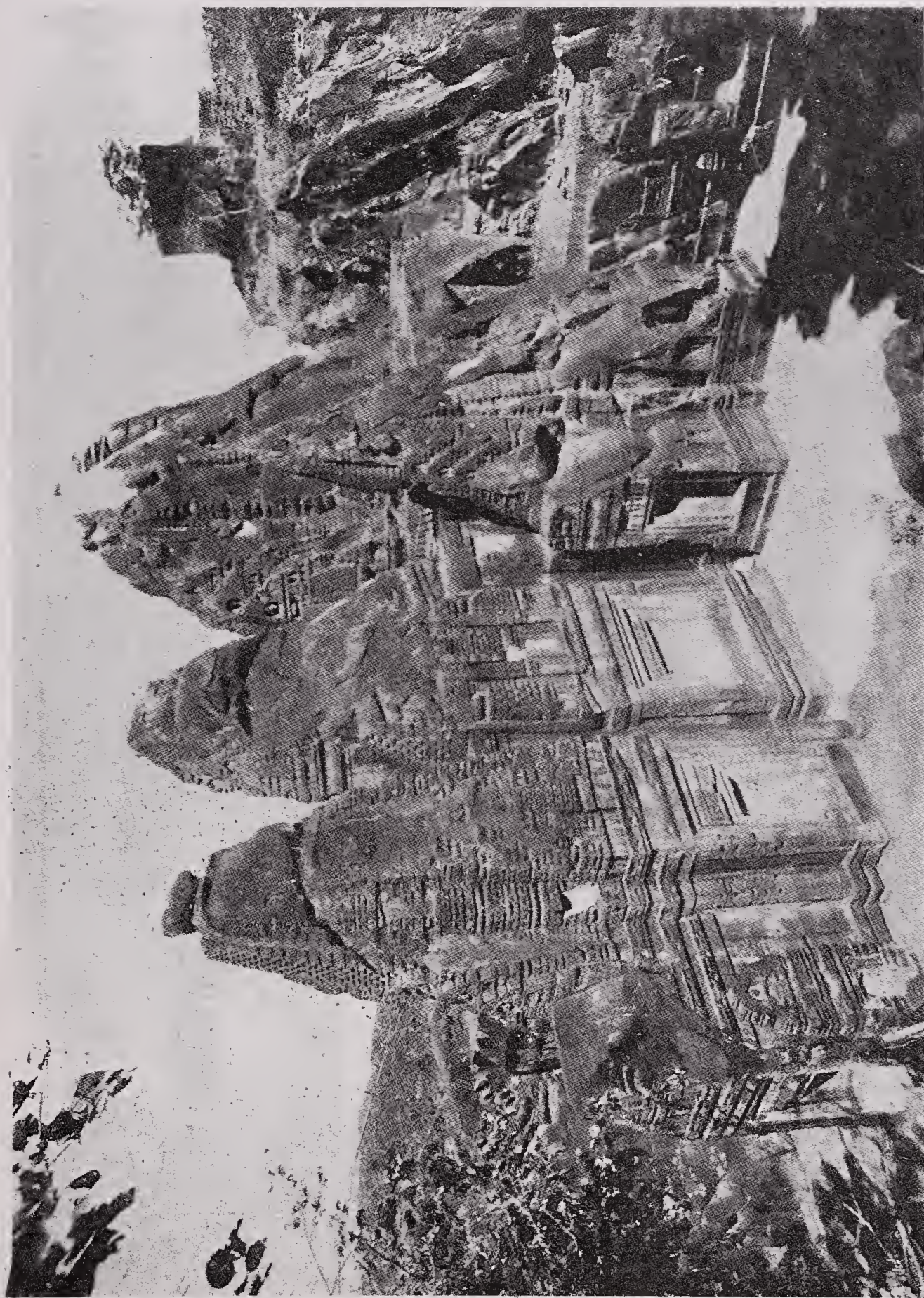
A



B

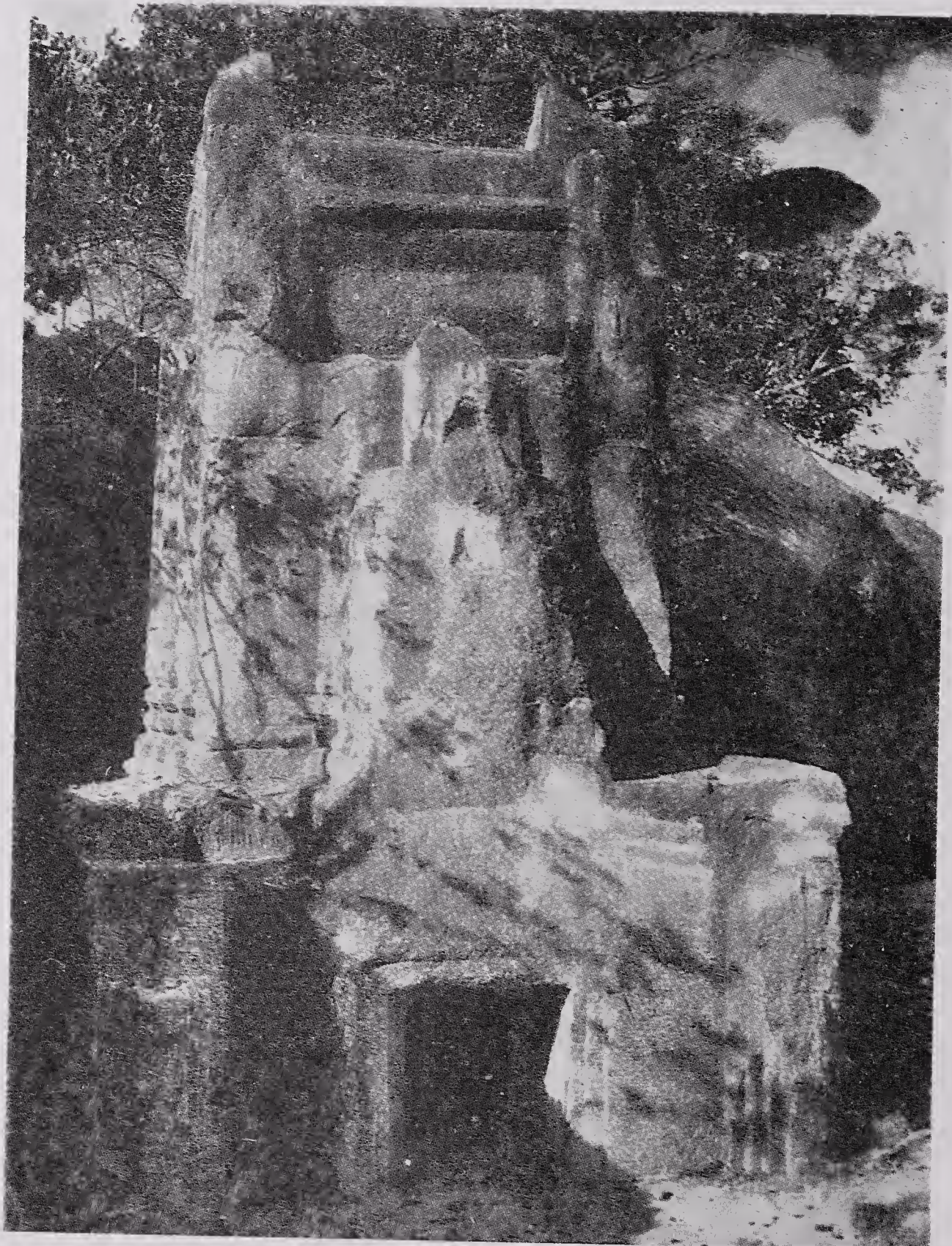
A, Kalugumalai : Vettuvāṅkovil ; B, Dhamnar : monolithic temple. See p. 153.

PLATE XLVII



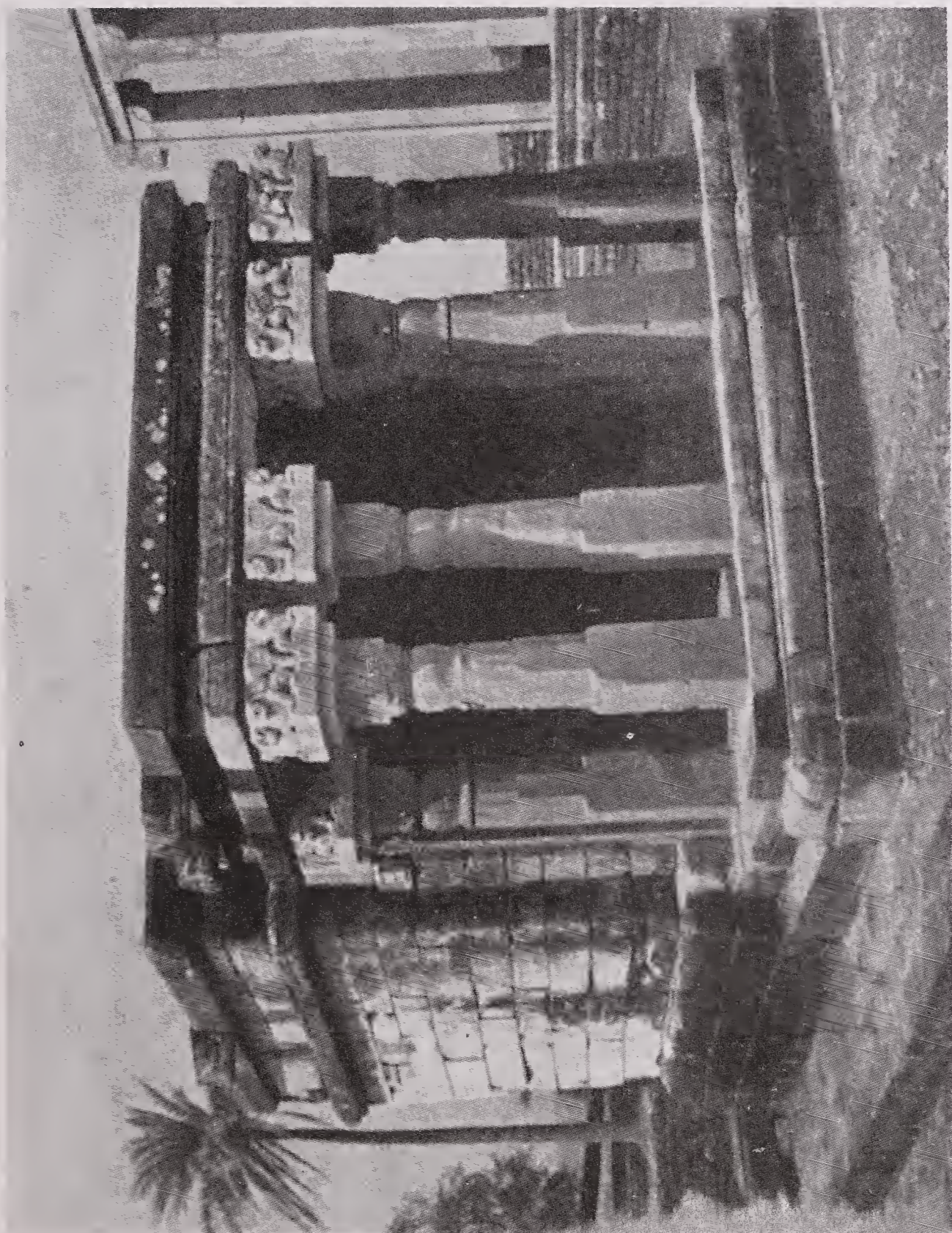
Masrur : monolithic temples. See p. 154

PLATE XLVIII



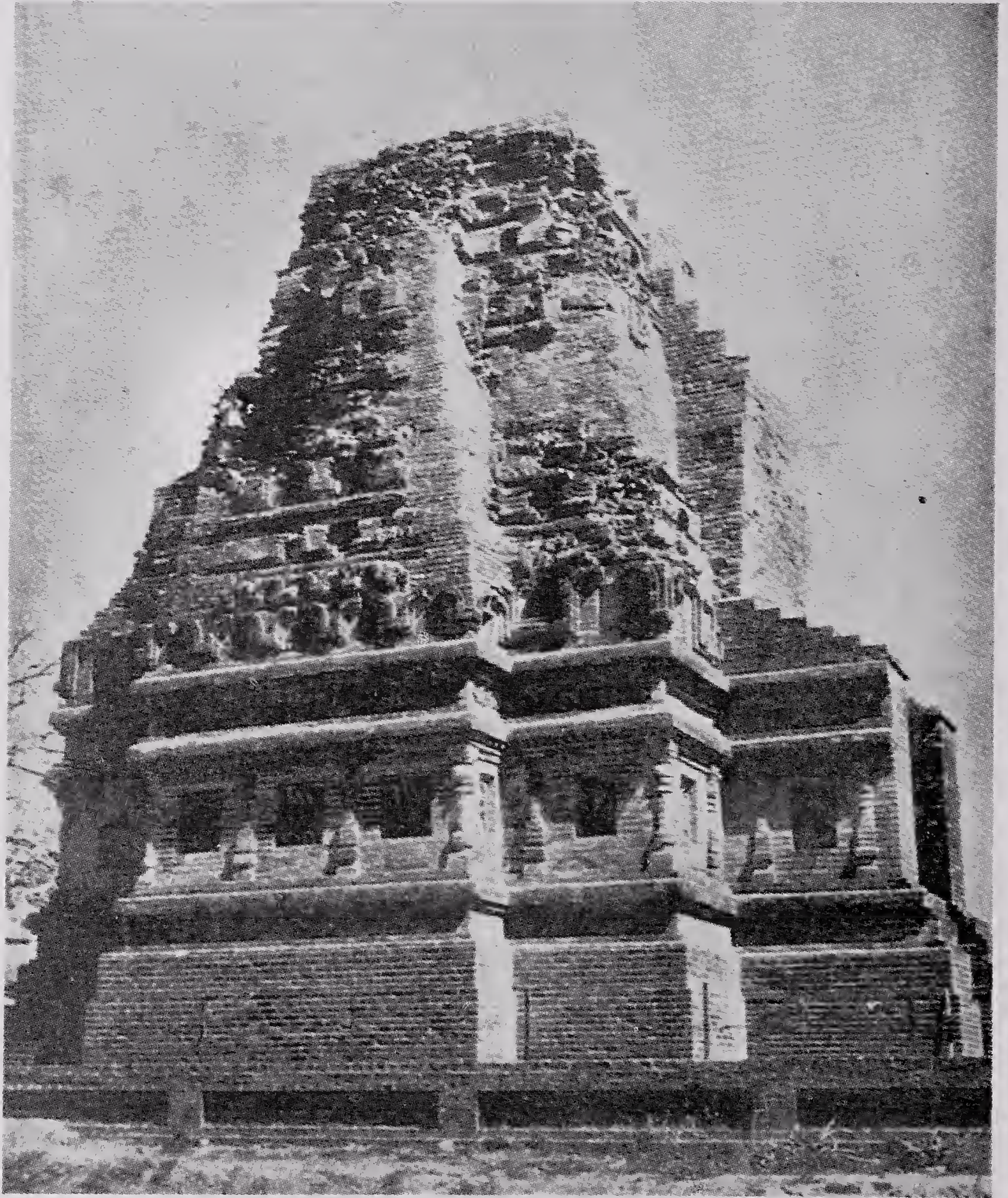
Colgong: monolithic temple. See p. 155

PLATE XLIX



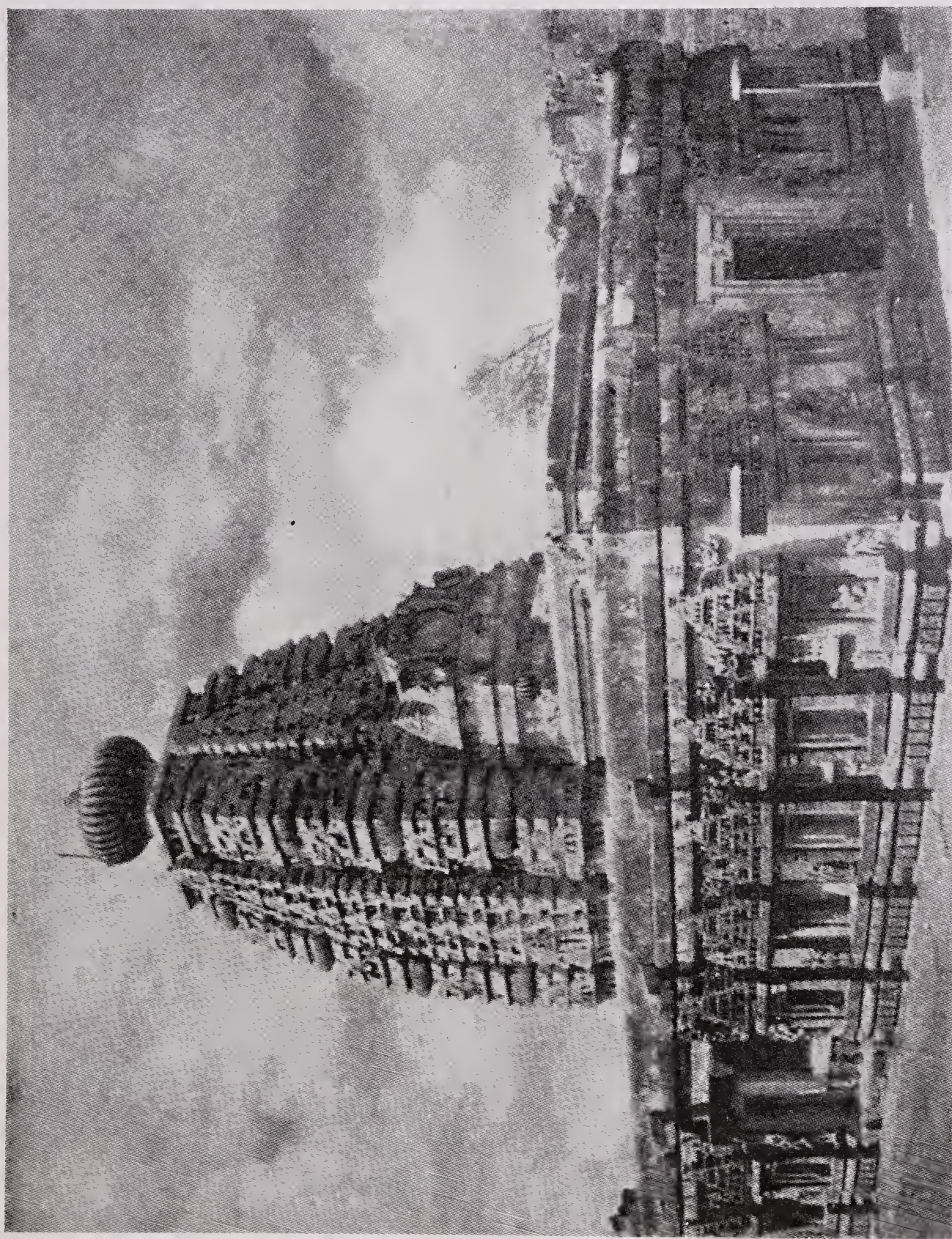
Sanchi : Gupta temple. See p. 159

PLATE L



Bhitargaon : brick temple.. See p. 159

PLATE LI



Alampur : Viśva-Brahmā temple. See p. 163

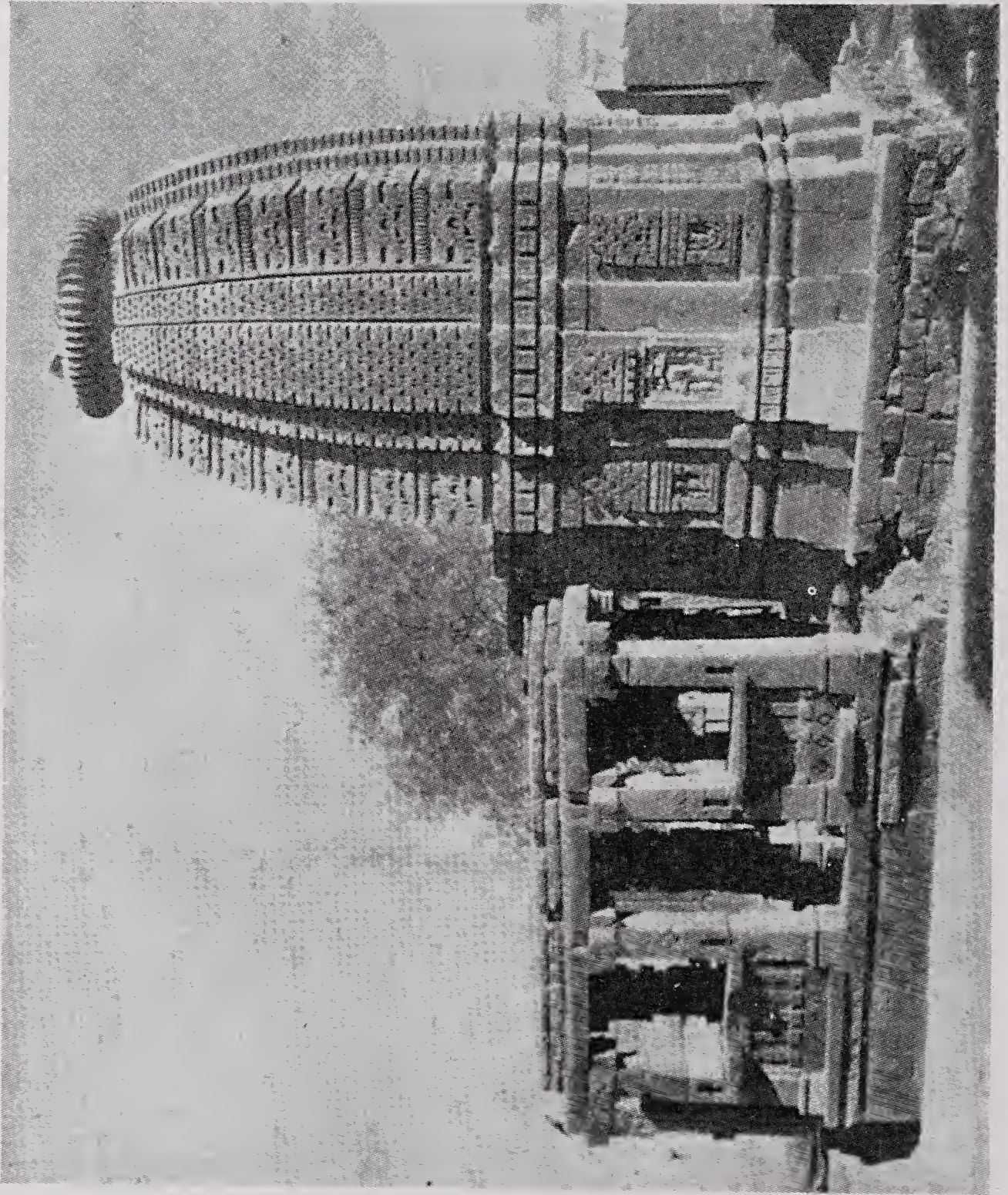


Jagatsukh : Siva temple. See p. 164

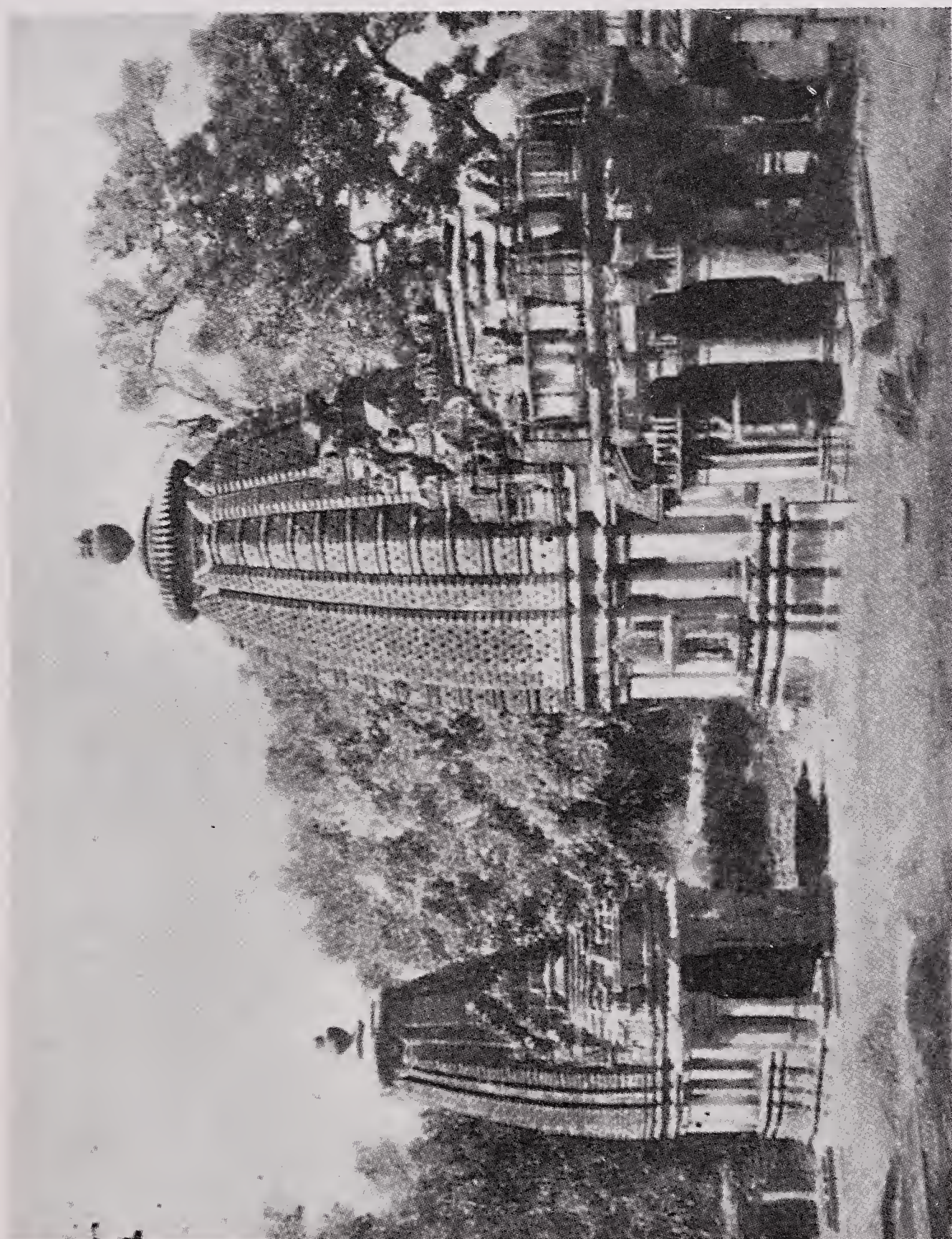


Gwalior : Teli-kā-Mandir. See p. 165

PLATE LIV

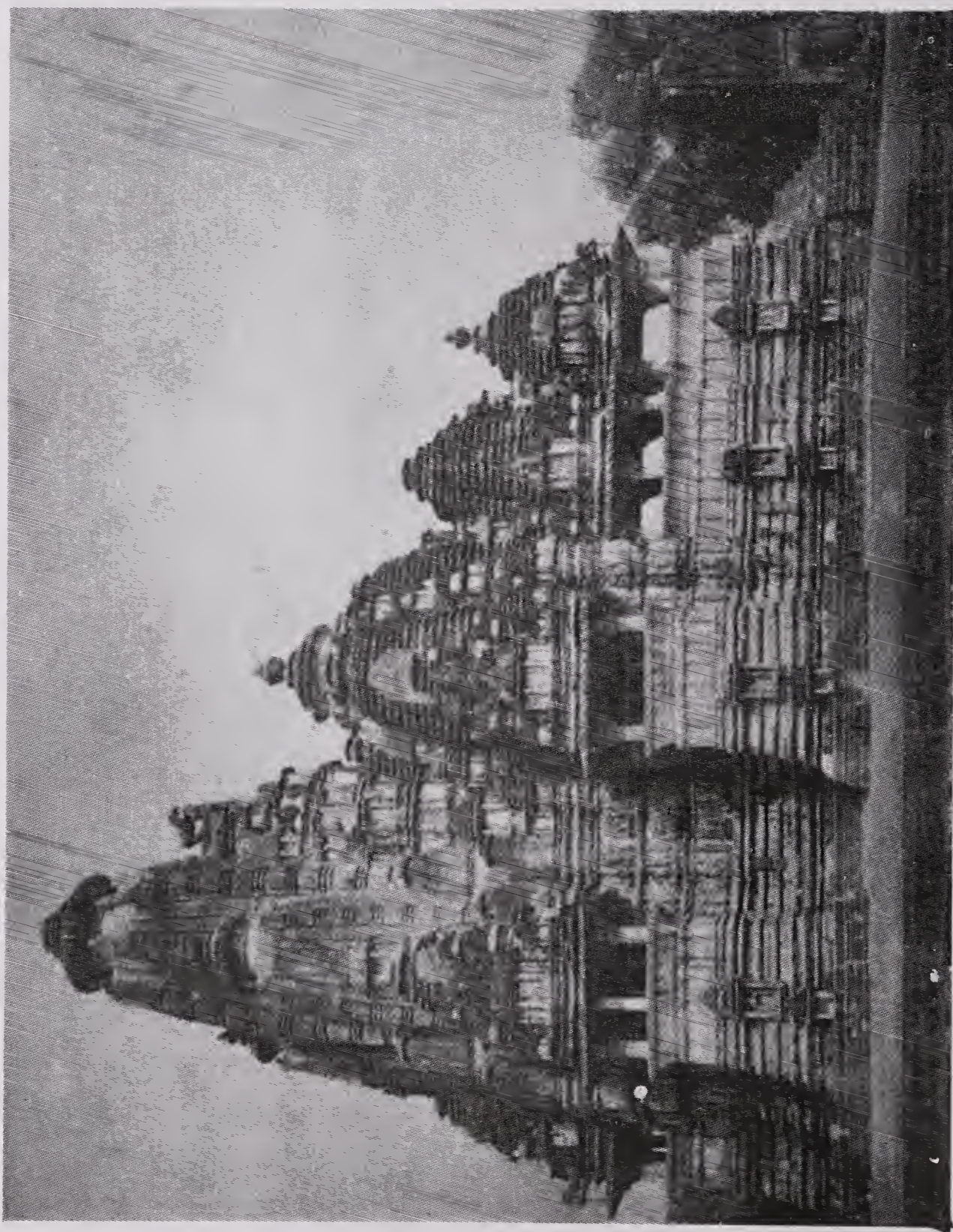


Osian : Sun temple. See p. 167

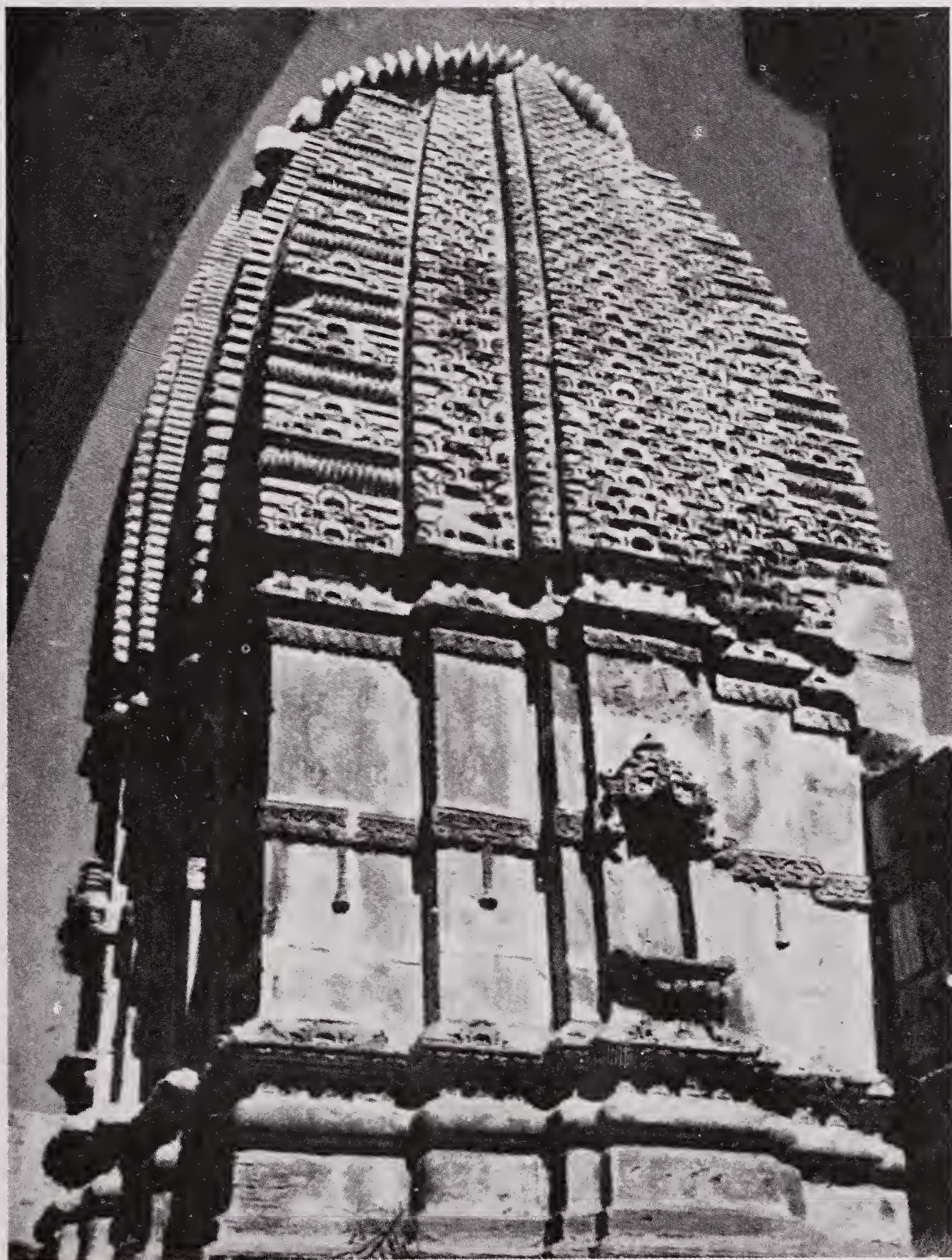


Barolli : Ghateśvara temple. See p. 168

PLATE LVI

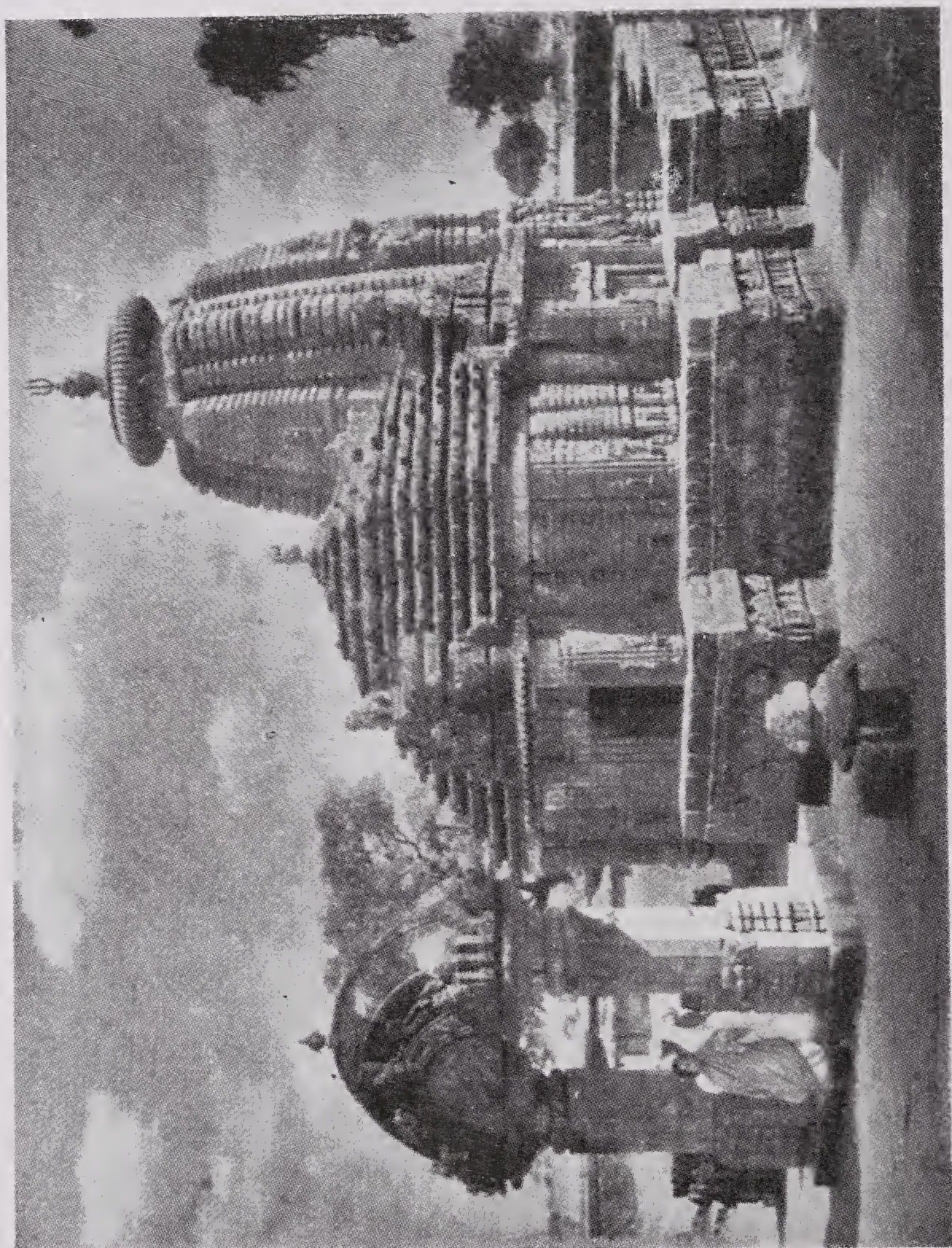


Khajuraho : Viśvanātha temple. See p. 176



Wadhwan : Rāṇakdevī temple. See p. 180

PLATE LVIII



Bhubaneswar : Mukteśvara temple. See p. 186

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प्रत्नकीर्तिमपावण्य

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ARCHAEOLOGICAL REMAINS MONUMENTS AND MUSEUMS

PART II



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CONTENTS

	PAGE
PART I	
I. Protohistoric remains	
<i>by Y.D. Sharma</i> ...	1
II. Remains of early historical cities	
<i>by Y.D. Sharma</i> ...	43
III. Northern Buddhist monuments	
<i>by Krishna Deva</i> ...	85
IV. Southern Buddhist monuments	
<i>by K.R. Srinivasan</i> ...	100
V. Rock-cut monuments	
<i>by K.R. Srinivasan</i> ...	109
VI. Northern temples	
<i>by Krishna Deva</i> ...	157
Plates I to LVIII	... at the end
PART II	
VII. Southern temples	
<i>by K.R. Srinivasan</i> ...	191
VIII. Islamic monuments	
<i>by Y.D. Sharma</i> ...	241
IX. Museums	
<i>by H. Sarkar</i> ...	329
Index	357
Plates LIX to XCVI	... at the end

ARCHAEOLOGICAL REMAINS MONUMENTS & MUSEUMS

VII. SOUTHERN TEMPLES¹

CONTENTS

	PAGE
1. Introduction	191
2. Under the Early Chālukyas	192
A. Aihole	192
B. Badami and Mahakuteshwar	196
C. Patadkal	199
3. Under the Eastern Chālukyas	203
4. Under the Rāshtrakūṭas	204
5. Under the Western (Later) Chālukyas... ..	206
6. Under the Hoysalas	209
7. Under the Kākatīyas	213
8. Under the Pallavas	214
9. Under the Early Pāṇḍyas	222
10. Transition from the Pallava to the Choḷa styles	223
11. Under the Choḷas	228
12. Under the Vijayanagara rulers	236
13. Under the Nāyakas	238
14. The west coast	239

1. INTRODUCTION

NAGARJUNAKONDA HAS REVEALED INTERESTING examples of brick temples of the third and fourth centuries dedicated to the Brāhmaṇical gods, variously with apsidal, square or rectangular plans.

¹ For the places mentioned in this chapter, see map, fig. 4, pt. I, p. 190.

SOUTHREN TEMPLES

The internal use of supporting limestone columns, as in the contemporary and earlier Buddhist structures of the place (above, p. 107), was perhaps a local and limited adaptation of stone in the otherwise brick-and-timber constructions, but the columns too must have carried wooden beams. Two other full-fledged examples of apsidal temples in the region are seen in the modest structures at Chejarla (District Guntur) and Ter (District Osmanabad), both originally Buddhist but later adapted respectively as Śiva and Viṣṇu temples.

The creation of rock-cut cave-temples in south India towards the close of the sixth century (above, p. 141) broke fresh ground in the history of south Indian temple-architecture. The urge to express in the new rock-material soon caught up, with the result that in the wake of the early cave-temples the total aspects of contemporary brick-and-timber temples came to be carved out of entire rocks as monolithic replicas by the Pallavas (above, p. 147). The Chālukyas, with their experience of quarrying out cave-temples in the evenly-bedded soft sandstone, soon perfected the technique of quarrying, sizing and tooling of large chunks of the material and of building them up into their early structural temples—the *mandapa*-type as adopted in cave-temples or imitations of the contemporary storeyed brick-and-timber structures.

2. UNDER THE EARLY CHĀLUKYAS

A. AIHOLE

The structural experiments of the Early Chālukyas were confined to their capital Vātāpi (modern Badami), the adjacent Mahakuteshwar and the twin

UNDER THE EARLY CHĀḲUKYAS

cities of Aihole and Patadkal (all in Bijapur District).

At Aihole the typical *maṇḍapa*-temple is exemplified by the Lād-Khān, Kontguḍi and Meguṭi. The first is a square closed *maṇḍapa*-like structure standing on a moulded *adhishthāna* (basement). The structure is a pillared hall, with a central group of four tall pillars supporting a flat roof surrounded by two peripheral rows of twelve and twenty pillars of lesser and least heights supporting a sloping roof of slabs. Thus the central bay is enclosed by a double aisle. The intercolumnar gaps of the peripheral group at the edges of the basement are closed on all sides by screen-walls of single massive slabs set on edge, except for the entrance in the middle of the eastern side, where the *maṇḍapa* is preceded by an open *mukha-maṇḍapa* (pillared porch). The slabs of the three central bays on the south and north are perforated into windows, but those of the central and extreme bays in the hind (west) wall are blank. The central flat-roofed bay of the main *maṇḍapa* has a *nandi*, while beyond it, on the west, the central bay in the hindmost aisle is formed into a small shrine by walling up on two sides between the inner and outer pillars and partly in front with a carved doorway, the wall and doorway-slabs raised over a moulded *adhishthāna*. This shrine has a sloping pent roof. Over the flat roof of the central bay is built another shrine, its walls made up of massive slabs. The plan and design anticipate similar temples on the west coast, where owing to the heavy rainfall sloping roofs are immensely suitable. In that region, temples of this type have their shrines located in the more or less flat-roofed central bay and are often of the *chaturmukha* type, with openings on all the four sides, as the Jaina temple at Karkala.

SOUTHERN TEMPLES

In the Lād-Khān there are many features, such as the massive columns of the cave-temple type intermixed with those with capitals with *potikas* of the order, the prevalence of the typical Chālukyan *lāñcchana* (coat of arms) embossed on one of the pillars of the *mukha-maṇḍapa*, the types of sculpture and the statuary, the designs of the perforated windows and the intercolumnar *kakshāsana* (stone seats with back-rests) of the *ardha-maṇḍapa*, which would, among many others, suggest a date for it immediately after the three earlier cave-temples of Badami (above, p. 132), i.e., early seventh century.

This dating is also supported by the foundation-inscription dated A.D. 634 in the Meguṭi temple, which is the most evolved of this type. It is a Jaina temple having a principal square structure, which is like a closed *maṇḍapa* on a moulded base, with four central taller pillars walled in between to form the central shrine, closed by peripheral walls on the east, south and west, and one on either side of an entrance in the middle on the north. While the central shrine occupies the larger central space of the nine square bays, two lateral shrines occupy the two hind corner bays, thus leaving a passage between them and in the rear of the central shrine. The three front bays form a rectangular *ardha-maṇḍapa* for the three shrines, while the two on either side of the central shrine form a sort of *antarāla* in front of the two side-shrines. The central bay of the *ardha-maṇḍapa* has four pillars carrying the roof, which is flat, as is the one over the central shrine, while the rest is sloping from centre to the top of the outer walls. The outer walls are relieved four times with three recesses, with pilasters and other members. The relieved parts carry *deva-koshṭhas* (niches), and the two extreme recesses on the east

UNDER THE EARLY CHĀḲUKYAS

and west, as also the two flanking the *ardha-maṇḍapa* entrance, have perforated windows. A smaller *mukha-maṇḍapa* on the same *adhishṭhāna* is coeval, but a large open *maṇḍapa* is a late addition. On the top of the central shrine-roof was added another shrine open to the sky in later times.

The Kōntguḍi complex consists of three temples, two of them facing each other, with a tall open *maṇḍapa* occupying the open space between them. The third stands to the south of the first and likewise has its shrine-cell at the rear. The *maṇḍapa* temple has a shrine at its centre.

The Durgā temple is essentially of the southern type, with a later northern type superstructure imposed upon it—an incongruity apparent from the fact that the superstructure is a square structure clumsily fitted over an apsidal cella. The temple stands on a high moulded *upapīṭha* (sub-base), apsidal on plan and carrying a peripheral row of columns on its edge that surround the moulded *adhishṭhāna* and walls of an apsidal *vimāna* and its front *maṇḍapa*. Thus the colonnade forms a covered circumambulatory with a sloping roof. The open *maṇḍapa* is continued forward on a base of smaller width. The peripheral pillars of the front *maṇḍapa* and those at the forward end of the circumambulatory have large statuary on them. The *adhishṭhāna* inside is again apsidal, moulded with all the components, and carries the apsidal wall enclosing the inner apsidal wall of the cella or *garbha-griha* and a closed *mahā-maṇḍapa* in front of it, with two linear rows of four columns in each row that divide it into a central nave and lateral aisles. The central nave has a higher flat roof raised over a sort of clerestory in front of the cella-entrance, and two lateral aisles have sloping roofs, at a lesser height than the central

SOUTHERN TEMPLES

roof. The aisles of the *mahā-maṇḍapa* are continuous on either side, with a closed inner circum-ambulatory between the inner and outer walls of the cella, which again has a sloping roof. The *adhishṭhāna* of the apse is projected forward into the porch-like front *maṇḍapa* of a lesser width with four pillars in two rows. The reliefs on the *adhishṭhāna* and outer wall are cantoned by pilasters and enclose niches which are framed by shrine-fronts of all the patterns of northern and southern *vimānas*, *kūṭa*, *śālā*, *pañjara*, *udgama*, etc., and contain bold sculpture. The four recesses, two each between the three bays on the north and south sides and two more between the three bays round the apse-end, are provided with perforated windows. Over the inner wall of the cella perhaps rose the original apsidal *grīvā* and *śikhara*, as in the temples at Ter and Chejarla (above, p. 192), either with a wholly-solid core or supported by props inside. The advanced features of the temple, the variety of evolved shrine-fronts displayed in its niches, the style of its sculpture, its diverse corbel-forms and the existence in it of a chute, water-spout and the gargoyle-like *praṇāla*—a late feature—would justify placing the temple in the eighth century. This is also indicated by an inscription of Chālukya Vikramāditya II (733-46) on the ruined *gopura* at the south-eastern part of the enclosing-wall. The name 'Durgā' for the temple is misleading, since it was not dedicated to Durgā, and is due to the fact that till the earlier part of the last century the temple formed part of a fortification (*durga*), probably of the Marathas.

B. BADAMI AND MAHAKUTESHWAR

The early southern *vimāna*-type of structural temples built by the Chālukyas is exemplified by (1)

the two temples called the Mālegiṭṭi-Śivālaya standing on an outer crag in the hills on the northern side of Badami, (2) the Śivālaya higher up on the main hill on the same side, called the upper Śivālaya, (3) the main temple and the extreme southerly one called Mallikārjuna in the Mahākūṭeśvara group of northern and southern style temples inside an enclosure at Mahakuteshwar in the neighbourhood of Badami, and (4) the temple called Bānantiguḍi on the hill in front of the Mahākūṭeśvara. Of them, the Mālegiṭṭi Śivālaya (pl. LIX) is the simplest, axially consisting of a massively-built *vimāna*, composed of large blocks of stone, with a closed *maṇḍapa* of almost the same width and an open four-pillared porch of lesser width in front, all standing on a common moulded *adhishṭhāna*. The *maṇḍapa* carries a *hāra* (ring of miniature *vimānas*) made of *karṇa-kūṭas* at the corners with *śālās* in between, the rear *karṇa-kūṭas* forming in common the frontal *karṇa-kūṭas* over the first *tala* (storey) of the *vimāna* behind. The *adhishṭhāna* and the walls of the *maṇḍapa* are relieved in consonance with the *karṇa-kūṭas* and *śālās* above. The central bays on each side of the closed *maṇḍapa*, as also its re-entrant front walls flanking the *maṇḍapa*-entrance, contain niches for sculptures. The recesses on the north and south have perforated windows. The *vimāna* behind rises in two storeys. Its base and walls are relieved thrice to correspond to the four corner *karṇa-kūṭas* and central *śālās*. These reliefs contain plain rectangular niches. The lower storey carries on the top of its *prastara* (entablature) a *hāra* of *karṇa-kūṭas* at the corners and *śālās* in between, the intermediate parts of the *hāra* being decorated by *nāsikās*. The second storey carries a *hāra* of four *karṇa-kūṭas*, closely adhering to and overtopping the corner

SOUTHERN TEMPLES

faces of the octagonal *grīvā*—a feature of early temples. The cardinal faces of the *grīvā* have *nāsikās* of equal size. The *śikhara* is heavy octagonal and dome-shaped, of almost the same width as the *grīvā* below—again an early feature.

The Bānantiguḍi is of a similar type, though more plain and simple, with a two-storeyed *vimāna*, square on plan, and without a *śuka-nāsikā*. The *grīvā* and *śikhara* are also square.

The main temple of Mahakuteshwar consists of a *vimāna*, square on plan and with a closed frontal *maṇḍapa* preceded by an open porch. The *garbhagriha* has an inner circumambulatory surrounding it. Externally the *vimāna*-wall and its *adhishṭhāna* are relieved in the centre of each side into bays, the two lateral recesses on the north and south walls containing perforated windows framed between pilasters carrying a *prastara* above with a prominent *kapota* (cornice). While the *prastara* carries the southern motif of a *hāra* composed of two *kūṭas* and a *śālā* between the eastern recesses of the north and south walls, the western recesses over the *prastara* above the windows have the northern motifs of *udgamas* and *āmalakas*. The cantoning pilasters at the corners of the walls and the bays have well-developed capital-components of the order. The bays on the walls have niches containing sculptures of Śiva. On the top of the first storey are *karna-kūṭas* at the corners and *śālās* over the bays in between. The *adhishṭhāna* is widened and extended forward as the base of the larger square *maṇḍapa* with a central relief each on the north and south sides, and two more, one on either side of the entrance in front, enclose niches, again containing sculptures of Śiva. The recess on either side of the central reliefs on the north and south have perforated

UNDER THE EARLY CHĀLUKYAS

windows. The superstructure, now whitewashed, carries an octagonal *grīvā* and a similar *śikhara* on the top with *nāsikās* on the four sides, and closely attached *karna-kūṭas* at the four corners. The closed *maṇḍapa* is pillared inside. The shrine-doorway, as is usual in all the Chālukyan examples, is elaborately carved with an overdoor having many moulded components or *śākhā*. The temple belongs to the seventh century. The Mallikārjuna temple inside the enclosure of the Mahākūṭeśvara group is better preserved and is very much of the same type as the main temple.

The upper Śivālaya within the northern fort at Badami has a *vimāna* surrounded by a closed circum-ambulatory, the walls of which are extended forward so as to enclose a pillared *maṇḍapa* with a central nave having a flat roof in front of the *vimāna* and lateral aisles. These aisles and circumambulatory into which they continue have sloping slab-roofs. The external walls surrounding the *maṇḍapa* and the *vimāna*, as also its *adhisṭhāna*, are relieved with alternating bays and recesses to correspond to the *kūṭas* and *śālās* in the *hāra* above. The recesses have similar tall pilasters of lesser height, carrying *nāsikās* on the top, which constitute the corresponding *kūṇḍas* of the main cornice above. The *vimāna* rises in four storeys of diminishing squares with prominent cornices—an advanced feature. The *grīvā* and *śikhara* are square, with four *nāsikās* on their four faces, there being no *śuka-nāsikā*.

C. PATADKAL

The Saṅgameśvara, Virūpāksha and Mallikārjuna temples at Patadkal exhibit to a large degree the southerly elements in their *vimānas*, as crystallized

SOUTHERN TEMPLES

in the contemporary Pallava temples (below, p. 214). The Saṅgameśvara, the earliest of the three, built by Chālukya Vijayāditya (697-733), is nearer the Pallava form in that it has no *śuka-nāsikā*, while the other two, which possess this, are the earliest of the Chālukyan type and its derivatives possessing this architectural member, as also does the Kailāsa at Ellora (above, p. 151). Both the Saṅgameśvara and the larger Virūpāksha are similar to each other in being square on plan from the base to *śikhara*. The Virūpāksha, built by the queen of Vikramāditya II (733-46), is the earliest dated temple with the *śuka-nāsikā*, being closely followed by the Mallikārjuna, built by another queen of the same king.

The main *vimāna* of the Saṅgameśvara is of three storeys. The lowermost storey is surrounded by two walls, the inner and outer, the second storey being an upward projection of the inner wall, while the outer wall encloses the covered circumambulatory round the sanctum. The latter further extends forward to enclose an *ardha-maṇḍapa* and widens out over the same moulded *adhishṭhāna* to form a closed *mahā-maṇḍapa* with four rows of five pillars each. An open pillared porch is attached to the middle of the northern side of the *mahā-maṇḍapa*. The exterior wall also contains a series of niches containing sculptures of a varied iconography. The *prastara* over the outer wall of the *vimāna* carries a *hāra* of *karṇa-kūṭas* and *śālās* corresponding to the relieved parts of the wall and *adhishṭhāna* below, which encloses inside an open circumambulatory round the second storey over the roof of the lower one. At the centre of each side the *hāra* is pierced by projecting water-spouts, and over them the *hāra*-part carries incipient *pañjaras*, perhaps the first appearance of this third characteristic member of the *hāra* of the southern

UNDER THE EARLY CHĀLUKYAS

temples and the earliest in the Chālukyan series. The second storey also carries a *hāra* of four *karṇa-kūṭas* at the corners and four *bhadra-śālās* on the relieved centres of each side. The third storey carries only four cardinal *bhadra-śālās* over the middle of the four sides, coming in front of the cardinal *nāsikās* of the square *grīvā* and *śikhara* that rise behind. The absence of *karṇa-kūṭas* of the *hāra*—the first step towards the elimination of the *hāra* itself—and the placement of the respective *vāhanas* (vehicles) or *lāñchhanas* (symbol) of the main deity enshrined in the *garbha-griha* below at the four corners on the roof of the topmost storey round the *grīvā* became an invariable characteristic of the later temples. The Saṅgameśvara marks another landmark, viz., the insertion of two side-shrines at the two ends of the *ardha-maṇḍapa* on either side of the entrance to the cella dedicated to Durgā and Gaṇapati.

The Virūpāksha (pl. LX) is a large complex consisting of a tall *vimāna* with axial *maṇḍapas* and peripheral sub-shrines round the court, enclosed by a wall with *gopura*-entrances in front and behind, all designed and completed at one time. As such, this is the earliest extant temple-complex in the Chālukyan series. The massive *gopuras* are also the earliest. The *parivārālayas* (sub-shrines) are two-storeyed and are of the *kūṭa*-or *śālā*-type, originally thirtytwo in number. The axial structures consist of the tall *vimāna* of four storeys, square on plan from the base to the *śikhara*, the lowermost double-walled storey as usual enclosing a closed circum-ambulatory. The outer wall, with its *adhishṭhāna*, is externally thrown into five bays with four intervening recesses on each side; the cardinal bays at the centre of each side are the widest corresponding

SOUTHERN TEMPLES

to the *bhadra-śālās* over the *prastara* above, the corner ones middling, corresponding to the *karṇa-kūṭas*, and the intermediary ones, least in width, corresponding to the *pañjaras* over the *prastara*. The *maṇḍapa* is a multi-pillared hall, with its massive pillars richly sculptured, and there are three open pillared porches projected from the centre of the three sides of the *maṇḍapa*, east, north and south. The *śālās* over the north, south and east entrances of the *maṇḍapa* have an additional storey, thus raising them over the general height of the *hāra* and making them simulate inner *gopuras* of a lesser order. The relieved bays cantoned by pilasters with capitals of the order enclose niches inside *kūṭa*-, *pañjara*- or *torana*-frames, while the recesses have variously either niches or perforated windows. The *ardha-maṇḍapa* has the Durgā and Gaṇeśa shrines at either end inside. The second storey is an upward extension of the inner wall of the storey below, its front projected as the base of the *śuka-nāsikā*. On the top it carries a *hāra* of four *karṇa-kūṭas* at the four corners and three *bhadra-śālās* on the three sides except on the *śuka-nāsikā* front. The third storey, a smaller square and of a shorter height, has relieved walls and repeats the same scheme of *karṇa-kūṭas* and *bhadra-śālās* on three sides, its front projected into the second storey of the tiered *śuka-nāsikā*, which in design is of the form of a multi-storeyed apsidal shrine, with appropriate front. The fourth storey, still smaller, carries only four *karṇa-kūṭas* at the corners, revealing the square *grīvā* and basal part of the square *śikhara* with their cardinal *nāsikās* to full view, and is projected on the front to form the top *śikhara* with arched front of the *śuka-nāsikā*. The compound-wall of the complex, following the plan of the group itself, has on its coping *kūṭa*- and *śālā*-heads,

UNDER THE EARLY CHĀLUKYAS

suggestive of a derivation from the Shore-temple at Mahabalipuram (below, p. 215)—a device which gives the impression of a lower storey when viewed from a distance.

The Mallikārjuna, built immediately after and close to the Virūpāksha, is a smaller temple with a four-storeyed *vimāna* with a circular *grīvā* and *śikhara*. It has more or less a similar plan, with a prominent *śuka-nāsikā* projected over the top of the *ardha-maṇḍapa*, from the front of the second, third and fourth storeys of the *vimāna*. The topmost storey does not carry a *hāra* of either *kūṭas* or *śālās*, thus exposing to full view the well-formed circular *grīvā* and *śikhara* with their cardinal *nāsikās*.

3. UNDER THE EASTERN CHĀLUKYAS

A collateral branch of the Chālukyas, called the Eastern Chālukyas, ruled over the coastal Āndhra region with their capital at Veṅgi. Among their structural temples, those at Biccavolu in East Godavari District and Pondugala in Guntur District are characteristic.

The group of temples at Biccavolu form a series dating from about the beginning of the ninth century to the first half of the eleventh. Of them three ruined temples, two respectively called Kansaraguḍi and Nakkalaguḍi and the third without a name, all on the outskirts of the village, form the earlier group (*circa* 850-950), perhaps of the time of Guṇaga Vijayāditya (848-91) and his successors. They conform closely to the main southern tradition of the Pallavas and are three-storeyed *vimānas*, square from the base to the *śikhara*, the two lower storeys carrying four *karṇa-kūṭas* and four *bhadra-śālās*.

SOUTHERN TEMPLES

The *pañjara* and *śuka-nāsikā* are absent, which would place these temples nearer the Pallava cognates and derivatives. The pilasters are tetragonal as in all early temples, with full capitals of the order. The *kūdus* or *nāsikās* in the flexed cornices are horseshoe-shaped, as in the Pallava and Early Chālukyan forms, and the pronounced *makara-toraṇa* aspect is emphasized in detail with a pair of additional *makara*-heads above on either side of the finial.

The three other temples inside the village, the Golingeśvara, Chandraśekhara and Rājarājeśvara, belong to the second group, built a century later (*circa* 950-1050); the Rājarājeśvara was named perhaps after Rājarāja Narendra (1019-60). They are also three-storeyed *vimānas*, square from the base to the *śikhara*, but their superstructures are either entirely or partially restored especially in the regions of the *grīvā* and *śikhara*. They are also plastered over, so that many of their finer details are obscured, though it is seen that the Golingeśvara contained some interesting sculpture.

4. UNDER THE RĀSHṬRAKŪṬAS

Of the structural temples of the Rāshṭrakūṭas in the area of the Early Chālukyas, whom they ousted in the last quarter of the eighth century and whose architectural traditions they inherited, the one on the outskirts of the temple-city of Patadkal (above, p. 193) is interesting. It is essentially a three-storeyed *vimāna*, square on plan from the base to the *śikhara*, the ground storey containing the principal *garbhagriha*, being double-walled as usual with a closed circumambulatory between the two walls. The

UNDER THE RĀSHṬRAKŪṬAS

kūḍu-motifs on the cornice-tier of the *adhishṭhāna*, and higher up have lost their original *nāsikā*-shape and become flat triangular reliefs, the precursor of the 'dentil'-reliefs of the Later Chālukyan and Hoysala temples. Likewise, the capital-members have changed from their robust shapes into more conventional forms characteristic of the Later Chālukyan derivatives. The *navaraṅga* of the lower storey, connected with it by a short *antarāla*, shows on its walls seven bays alternating with six recesses adorned with *nāsikā*-forms containing seated *Jinas* and other figures. The *prastara* carries a *hāra* of *kūṭas*, *śālās* and *pañjaras*. Rising over the roof-level, the inner wall of the main cella forms a second functional storey, enclosing a sanctum surrounded by an open circumambulatory behind the *hāra* over the lower storey. In front its entrance is masked by the basal part of the projected *śuka-nāsikā* that extended over the roof of the *antarāla* below, forming the upper vestibule for this shrine. The second storey carries on its top four *karṇa-kūṭas* and three *bhadra-śālās*, the front one absent because of the *śuka-nāsikā*. The third storey, of lesser width, is relieved in the centre of each face, except on the east or *śuka-nāsikā* face. These contain *udgama*-motifs as in northern temples. The square *śikhara*, following the same scheme of reliefs, simulates a twelve-ribbed member. In front of the *navaraṅga* is the open multi-pillared *mukha-maṇḍapa*, the peripheral pillars having the usual *kakshāsana* between them. Except the two innermost pillars of the peripheral series abutting on the *navaraṅga*-front, all others as well as the four central ones, though in sandstone, are partially lathe-turned, heralding the more completely lathe-turned pillars of chloritic schist or steatite of the Later Chālukyas and their successors.

SOUTHERN TEMPLES

5. UNDER THE WESTERN (LATER) CHĀLUKYAS

With the coming back to power of the Chālukyas, also known as the Western or Later Chālukyas, in their home-country towards the close of the century, now with Kalyāṇa as their capital, the original traditions were continued, with a gradual introduction of significant modifications of the essentially southern type of *vimāna*. The sandstone temples of the Navaliṅga group and the slightly later Kalleśvara at Kukkanur near Gadag (District Dharwar) would perhaps mark the end of the sandstone tradition of the Eastern Chālukyas and Rāshtrakūṭas, before the Western Chālukyas adopted the chloritic schist. The Navaliṅga is a cluster of nine two- or three-storeyed small *vimānas*, square on plan from the base to the *śikhara*, built round the sides of a linear row of three *maṇḍapas*, with a fourth *maṇḍapa* near the group. They retain many characters of their archetypes in pilasters, *prastara* and other parts. The top storey is devoid of the *hāra* and, but for the *śuka-nāsikās*, they recall the Eastern Chālukyan examples at Biccavolu. The pillars of the *maṇḍapa* are partially lathe-turned. The *śikhara* has a splayed out thin brim, its sides are offset and the *kūḍu*-arches retain their arched character.

The Kalleśvara has a three-storeyed square *vimāna* with an *antarāla* and square closed *maṇḍapa* in front. The *maṇḍapa* has four windows, tunnelled into the thickness of the 2-m. thick lateral walls, one on either side of the two niche-like side-shrines inside. The storeys are not boldly marked as in the earlier buildings but are broken up into vertical arrangements of offsets and recesses. The *kūḍus* on the cornices are beginning to lose their

UNDER THE WESTERN CHĀLUKYAS

original bold horseshoe shape and have become flat facets. The square-based pillars inside are partially lathe-turned and show some advance over those in the Navalinga group. The most interesting feature is the smaller blocks of stone used in the construction, which is in contrast with the large-sized stones used in the earlier structures. The temples are of the latter half of the tenth century.

The large Jaina temple, among the many temples at Lakkundi, also near Gadag, is perhaps one of the earliest examples of temples in this area built of a kind of fine-textured chloritic schist as distinct from the hitherto-used sandstone of this region. The new material, because of its less thick quarry-sizes and tractability, reacted on the workmanship, with the result that the masonry-courses became reduced in size and the carvings more delicate and highly finished. The temple, perhaps built in the latter half of the eleventh century, has a five-storeyed *vimāna*, square on plan from the base to the *śikhara*, and had originally a closed square *navaraṅga* in front, though an open *maṇḍapa* was added in front later on. The central bay of the *navaraṅga* is a larger square than the peripheral eight around it. The second storey, as in the Jaina temple at Patadkal, (above, p. 199), is functional and has an *antarāla-maṇḍapa* in front over the vestibule of the lower storey. This raises the total height of the *vimāna* considerably. The three upper storeys are symbolic and had the *śuka-nāsikā* projected in front. The *kūḍu*-ornaments on the cornices, though flat, retain their arched shape and are characterized by *simha-mukha* (lion-mask) finials. The pilasters on the walls are slender and between pairs of them are tall *nāsikā*-fronts; in the recesses occur for the first time the 'decorative pilaster'—a pilaster carrying a shrine-pavilion on

SOUTHERN TEMPLES

the top of its abacus—a characteristic of contemporary Chola temples in the south—framed inside a *torana* carried on two flanking pilasters.

The Kāsī-Viśveśvara temple at Lakkundi (pl. LXI) and the Mahādeva temple at Ittagi, not far from Gadag, mark the art in this area at its zenith under the Western Chālukyas. The Ittagi temple was built according to its foundation-inscription in 1112 and was the centre of a complex, all built over a specially-raised terrace beside an ornamental tank. The main structure, now extant, is a five-storeyed *vimāna*, its *grīvā*, *śikhara* and *stūpi* missing. The entire *vimāna* is thrown into five bays on each side, the central thrown out the most, with narrower recesses in between and the bays again offset repeatedly, so that the plan is apparently scalloped. There are *karna-kūṭas* at either extreme over the *prastara* of each side of the storeys with a *bhadra-śālā* at the centre and two *pañjaras* intervening, one in each recess. Round the cella the most-projected central bays carry broad niches in the form of miniature *vimānas*, with pillars, *prastara* and superstructure, while the cantoning faces of the *karna-kūṭas* have narrower elevations of shrines. The *adhishṭhāna* is elaborately moulded. In front of the *vimāna*, at the ground level and on the forward extension of the same *adhishṭhāna*, stands a closed *navaraṅga* connected to the *vimāna* by an *antārāla*. The central ceiling is raised and is highly ornamented particularly in its corner-slabs. The *maṇḍapa* has three entrances, and projected pillared porches which connect it with an open multi-pillared front *maṇḍapa*, again with projected porches. The second, third and fourth *vimāna*-storeys are projected forward over the *antarāla* into the typical *śuka-nāsikā*. The excessive decorative elements of the temple, as also the plan and other features, proclaim its

UNDER THE WESTERN CHĀLUKYAS

chronological proximity to the typical temples of the Hoysalas and the Kākatīyas.

6. UNDER THE HOYSALAS

The temples built under the aegis of the Hoysalas of Mysore (twelfth-thirteenth centuries) were also built of a very tractable, dense and fine-grained chloritic schist which lend to fine carving. The temple in general consists of a *vimāna*, connected by a short *antarāla* to a closed *navaraṅga*, which is often preceded by a *maṇḍapa*. It is not also unusual for it to have three main *vimāna* (*tri-kūṭa*), connected to the three sides by their respective *antarālas* to a common *navaraṅga* which has the front *maṇḍapa* on the fourth side. The whole complex stands on a raised terrace, broad enough to have a wide common circumambulatory. By the repeated offsetting not only of the sides, as in the later Chālukyan examples, but also of the angles, the resulting plan becomes stellate, a configuration which extends from the terrace to the topmost storey. This gives a larger surface-area by the proliferation of facets for the execution of a profuse and rather crowded sculpture, for which the Hoysala temples are noted. The *prastara* has a prominent caves-like cornice. The *maṇḍapas* have the gaps between their outer pillars closed by perforated or sculptured screens. The superstructure is a scheme of close-set *hāras* essentially of *kūṭas*, rising one behind the other and each marking a storey, the topmost carrying a short *grīvā* and octagonal *śikhara* terminating into a *stūpi*. The front of the upper storeys is drawn into a *śukanāsikā* over the *antarāla* below. The pillars inside the *maṇḍapa* have square bases and shafts finely

SOUTHERN TEMPLES

polished on the lathe and capitals of the order. Often the axial series of structures is surrounded by an open court and cloister inside the enclosure-wall that has an entrance only on one side—the *mahādvāra*.

Of the numerous temples of the Hoysalas, the most well-known are the Hoysaleśvara, among the many temples at Halebid, and the Chenna-Keśava at Belur (both in District Hassan), the two towns being the earlier and later capital-cities of the Hoysalas, and the Keśava temple at Somnathapur (District Mysore).

The Chenna-Keśava temple at Belur was built by Hoysala Vishṇuvardhana in 1117, and the name of the consecrated deity was Vijaya-Nārāyaṇa. It is the principal temple in a complex of later temples, all inside a spacious courtyard surrounded by a cloister and compound with a *gopura*-entrance on the east, now replaced with a modern superstructure. As designed and completed by Vishṇuvardhana, it had the *vimāna* of a beautiful stellate plan and superbly-carved doorway, with an *antarāla* connecting it to the *navaraṅga*. A few generations later, in the time of Ballāla II, who built the compound and the tank at the north-east corner, the *maṇḍapa* was provided with pierced windows between the pillars. The peripheral columns of the *maṇḍapa*, except for the porch-entrances that are fitted with ornate doorways, had a running platform (*kakshāsana*) inside. The whole stands on an terrace 1·5 m. high, the plan of the circumambulatory following that of the structures that it carried. The *adhishṭhāna* of the *vimāna*, *antarāla* and *maṇḍapa* is profusely carved with long lines of friezes, animal and narrative. The walls carry sculptures of iconographic interest and reliefs of miniature shrines. The bays on the three cardinal projections of the main *vimāna* form smaller

vimānas with cells inside. The overhanging *kapota* of the *maṇḍapa* is supported by numerous finely-carved caryatid-like feminine figures in graceful poses, called *madanikās*. In front of the main doorways of the *maṇḍapa* on the east, north and south, on either flank of the steps leading from the platform below, are posed two small *vimānas*, one on either side, with two more on the flanks of the steps leading from the court to the platform. The superstructure of the main *vimāna* is now lost. The pillars inside are lathe-turned, and a few of them are intricately carved or carry exquisite sculpture. The raised coffer-like central ceiling rising in eight tiers is also very intricately carved and bears a massive and delicately-wrought pendentive in the centre. The ceiling is supported at the base by bracket-figures even more beautiful than the *madanikās* outside. The temple is a veritable museum of sculpture, large and small, and intricate vegetal and floral carving.

The Hoysaleśvara (*circa* 1150), among many other temples at Halebid, is a composite of two similar structures standing side by side on a raised common platform. Each unit, like the Belur temple, consists of a *vimāna* of a star-shaped plan, with an *antarāla* and *navaraṅga* in front, which has cruciform projections on its three sides. The two adjacent inner arms of the crosses are connected to form a common transept linking up the two temples. Externally the intercolumnar spaces of the projected porches are screened by perforated windows above the level of the *kakshāsana*. The pillars inside are lathe-turned, and the central coffered ceilings of the *navaraṅga* have their bases supported as it were on beautiful bracket-figures. Externally the walls of the *vimāna* and the connecting transept, as also walls of the *maṇḍapas*, are covered with large sculptural

SOUTHERN TEMPLES

reliefs of remarkable fineness, while the mouldings of the *adhishṭhāna* are each an elaborate animal or narrative frieze. The superstructure of both the *vimānas* is lost. The platform, with the same plan as the structures, is a broad open circumambulatory. In front of the whole stand two open pillared *nandi-maṇḍapas* and the one in front of the southern *vimāna* has a shrine behind. The two are unsymmetrical later additions. Though incomplete, the Hoysalesvara, coming close after the great temple at Belur, marks the climax of Hoysala art and architecture.

The latest in the Hoysala series is the Keśava temple at Somnathpur built in 1268, which, though smaller, is more exquisitely carved. It is a *tri-kūṭa* temple (pl. LXII) with three principal *vimānas* of equal magnitude, complete with the characteristic *śuka-nāsikā*. Their *antarālas* open into a common *navaraṅga* on its west, north and south sides, the eastern side opening into a larger closed *navaraṅga* with fine lathe-turned pillars and elaborately-carved coffered ceilings of nine different designs, the central one being the most intricately carved. The sides of the *navaraṅga* above the level of the *kakshāsana* inside and over the *adhishṭhāna* outside are closed by perforated screens inserted between the pillars. The plan of the three *vimānas* is stellate from the base to the *śikhara*; their walls, with many re-entrant angles, expose the maximum number of facets for larger sculptures with or without framing shrine-motifs. The whole is mounted on the top of a platform of the same plan, with a wide circumambulatory space and two miniature *vimānas* flanking the flight of steps. The axial series is surrounded by an open court all round, with a peripheral cloister of sixtyfour shrines set in a continuous line. The *maṇḍapa* at

UNDER THE HOYSALAS

entrance behind the main entrance is a multi-storeyed rectangular structure, also with lathe-turned pillars.

7. UNDER THE KĀKATĪYAS

The temple at Hanamkonda (Warangal District), called the Thousand-pillared Temple, is a transition from the Late Chālukyan to the Kākatīya temples of this region. Built in 1162 by king Pratāparudra, the main part consists of a triple shrine (*tri-kūṭa*) of considerable dimensions, dedicated to Śiva, Viṣṇu and Sūrya, opening into a common *maṇḍapa*, all standing on a common platform. The *maṇḍapa* has open corners between the shrines on its three sides. The *adhishṭhāna*, the walls with pilasters and the *prastara* are repeatedly offset, with the central bay, projected most, carrying a small *vimāna* with cella. The superstructure is lost in all the three. The pillars of the *maṇḍapa* are lathe-turned. What is more interesting is the multi-pillared *maṇḍapa* with about three hundred pillars, all richly carved. Between this and the main structure is interposed a *nandi-maṇḍapa*.

The ruined temple within the fort at Warangal deserves mention for the elaborate *torāṇas* (pl. LXIII) marking its entrances.

The temples at Palampet (Warangal District) form a group of typical Kākatīya monuments. The main temple of the group, built in the beginning of the thirteenth century, stands on a high platform and is enclosed by a massive wall. In front is a *nandi-maṇḍapa*. The main *vimāna* is essentially square on plan from the base to the *śikhara*, the sides offset into five bays, the central further offset as the most projecting facet and containing a three-tiered replica

in miniature of the main *vimāna*. The other bays have tall pairs of close-set pilasters carrying on the top a *vimāna* superstructure of the southern or northern variety alternately. The storeys consist of indistinct *hāras*, where the *kūṭas* are more conspicuous, the *grīvā* again being indistinct, and of almost the same width as the square and domical *śikhara*. The entire superstructure is of brickwork. The *vimāna* is connected with the *navaraṅga* in front by a closed square *antarāla* or *ardha-maṇḍapa*. The whole is surrounded by a raised platform with an outer series of thirtytwo pillars and a circumambulatory. On the platform inside are set eight sub-shrines in pairs, adjacent to each corner of the *navaraṅga*. The most interesting feature is the array of caryatid-like brackets, rising from the capitals of the pillars and strutting up the beams or projected cornice or *kapota*. Twelve of these are almost life-size feminine figures with graceful bends of the bodies and the rest are rearing *vyālas*, their hind legs resting over elephant-heads. The bases of the peripheral pillars of the *maṇḍapa* are connected up by a balustrade, forming as it were the *kakshāsana* of the platform inside. Externally these are carved profusely with panels of diverse interest, including *mithunas*. The interior also is replete with sculpture and the ceilings of the bays are ornate. The *hāra* of the first storey is continued over the edge of the *maṇḍapa*-roof. While the main structure is of a reddish sandstone, the decorations and bracket-figures are of black polished basalt or hornblende.

8. UNDER THE PALLAVAS

In about the last quarter of the seventh century, in the reign of the Pallava king Parameśvaravarman,

experiments on constructions in stone was started. The shrine of Vedagiriśvara on the top of the hill at Tirukkalukkunram (Chingleput District), of the time of Parameśvaravarman, was originally a dolmen-like construction built of upright gneiss slabs, later encased by moulded stonework externally, with a roof-slab on the top. The inner faces of the slabs contain relief-sculptures, including the characteristic Somāskanda panel. The apsidal temple at Kuram (same District), built also in the time of the same ruler, employs granite slabs laid horizontally to form the mouldings of the *adhishṭhāna*, while the walls above are of upright slabs, set on edge, with a brickwork reinforcement from inside. But in the time of his successor Rājasimha (*circa* 700-28), who was a great builder, many structural temples were built at Mahabalipuram, as also Panamalai (South Arcot District) and his capital Kanchipuram (Chingleput District), employing stones of different kinds and hardness. Granite-gneiss or charnockite was soon to become the building-material of his successors and the subsequent dynasties that followed in the southernmost parts of south India, as it is in present times also.

The Shore-temple at Mahabalipuram (pl. LXIV), a complex of three shrines with accessory *maṇḍapas*, is perhaps an early essay of Rājasimha in building a large temple-complex of hard stone. Of the three shrines, the largest called Kshatriyasimheśvara, facing the sea on the east, and the smaller *vimāna* called Rājasimheśvara, facing west, are both dedicated to Śiva and have between them a rectangular *vimāna*, without superstructure, enshrining recumbent Viṣṇu, cut out of a low living rock. The axial *maṇḍapas* with the *gopuras* are in front of the smaller *vimāna*, the whole enclosed by a

SOUTHERN TEMPLES

massive compound-wall. The Kshtriyasimheśvara, standing at a higher level with its own enclosure-wall set closer round its *vimāna* and *ardha-maṇḍapa* bases, is a slightly later addition seawards. The smaller western *vimāna* is square on plan from the base up to the *grīvā* and is three-storeyed with *hāras* of *kūṭas* and *śālās* over the façade of the *ardha-maṇḍapa* and all round over the second storey above. The third storey rises high and clear off over the *hāra*, carrying in its four corners figures of *bhūtas* and a tall octagonal *grīvā* surmounted by a *śikhara*, all tall and octagonal. The *stūpi* is of polished black basalt. The pilasters on the walls have for their bases rearing lions or *vyālas*, a characteristic of the time. The four-storeyed eastern *vimāna* is also likewise square up to the *grīvā*, the first storey enclosing the shrine over the *adhishṭhāna* rising high above the surrounding enclosure-wall. The top of this storey has four seated lions at the four corners, while the coping of the enclosure-wall is a *hāra* of *kūṭas* and *śālās*, with a larger *śālā* surmounting the seaward opening on the east. The second storey of the *vimāna* carries a full *hāra* of four *karṇa-kūṭas*, four *bhadra-śālās* and eight *pañjaras*. The third storey has only four *karṇa-kūṭas* and four *bhadra-śālās*, while the fourth carries on the top at the corners four seated *bhūta*-forms with a tall octagonal *grīvā* and *śikhara*. The *stūpi* again is of black basalt. The row of *kūṭas* and *śālās* over its enclosure-walls, which continues on the west over the top of the Vishṇu shrine produces the semblance of a five-storeyed *vimāna* from outside. The usual Somāskanda reliefs are found on the hind walls of both the Śiva shrines in addition to fluted *liṅgas* of black basalt, installed perhaps slightly later in the same region in the centre on the floor. The sculpture on the

UNDER THE PALLAVAS

walls, much inferior to the fine rock-cut reliefs of Mahabalipuram, are large compositions done *in situ*.

The Tālagiriśvara temple at Panamalai, also built by Rājasimha, is an elegant construction in hard reddish granite. Its square moulded *adhishṭhāna*, as well as the walls of the first storey enclosing the principal shrine above, are projected much forward on the middle of the sides, the rectangular bay on the east forming part of the *antarāla*, and those on the other sides contain shrines and, like the bay on the east, carry the large forwardly-set *bhadra-śālās* of the *hāra* above, while the *karṇa-kūṭas* occupy the four corners of the main square. The second and third storeys of the four-storeyed *vimāna* repeat the same plan of the bays on the cardinal sides carrying four *bhadra-śālās* with *karṇa-kūṭas* at the four corners, while the topmost storey has no *hāra* but four *nandis* on its four corners. A modern brick-and-stucco *grīvā* and *śikhara* replace the octagonal stone originals as does the metal *stūpi* on the top. The rear wall of the sanctum has a Somāskanda relief much higher above the horizontal middle line, suggesting the original design of a simultaneous installation of a *liṅga* in the centre of the floor and the necessity therefore of keeping the panel clear above it. The inner walls of the *ardha-maṇḍapa* has large reliefs of Brahmā and Viṣṇu. The northern outer shrine contains remnants of Pallava mural painting depicting Śiva in *tāṇḍava* with Pārvatī.

The Kailāsanātha temple-complex at Kanchi (pl. LXV), also built by Rājasimha and his son Mahendravarman, is built of coarse sandstone, incorporating gneiss-slabs in the top and bottom courses of the *adhishṭhāna*. The main *vimāna*, Rājasimheśvara (now called Kailāsanātha), is a four-storeyed and essentially square structure up to the *grīvā*,

which and the *śikhara* above are octagonal. The moulded *adhishṭhāna* and the outer walls of the first storey are not only prominently relieved into four rectangular bays on the four cardinal sides as in the Panamalai temple, but also disposed as four square bays at the four corners, in consonance with the four *bhadra-śālās* and four *karṇa-kūṭas* of the *hāra* above. While the eastern rectangular bay forms the *antarāla*, the others form attached two-storeyed *vimānas* with cella inside the lower storey enshrining large relief-sculptures on their walls. The inner wall of the *garbha-griha* is plain and square. The second storey rises over the corbelled slabs forming the ceiling over the closed circumambulatory that bridge the space between the tops of the outer and inner walls. While the *pañjaras* are absent over the first storey, their place being taken up by smaller intermediary *śālās*, the second storey carries full *hāras* with *kūṭas*, *śālās* and *pañjaras*—two-storeyed miniature *vimānas* of the respective type. The third storey has again a *hāra* of *kūṭas* and *śālās*, while the fourth carries only four *nandis* at the four corners. The cantoning pilasters of the outer wall of the *vimāna* round the sanctum have the characteristic rearing lion-bases, as also the corner pillars of the detached *maṇḍapa* in front. The whole is surrounded by a compound-wall enclosing an open court inside. The large opening is occupied by a large rectangular two-storeyed *śālā*-type *vimāna*, the Mahendravarmaśvara, built by the son, with its *gopuram*-like *ardha-maṇḍapa*. Both its storeys are devoid of the *hāra*. The western opening is a real but small *gopura*. All round the inner face of the compound-wall is built an array of fiftyeight small *vimānas* mostly of the *kūṭa* type, variously containing group-sculptures of Brahmā and Viṣṇu, paintings or

UNDER THE PALLAVAS

sculptures of Somāskanda. The external walls of these smaller *vimānas* as also the recesses between them are filled with relief-sculpture adding to the profusion of similar sculpture on the walls of the two main *vimānas*, thus making the complex a veritable museum of iconography and plastic art. The Mahendravarmaśvara has a smaller enclosure with a *gopura* in front and lateral entrances in addition near the two front corners. Internally there are two lateral rectangular shrines in the centre on north and south, all a subsequent addition within Pallava times. In front of the whole complex stands a row of eight small *vimānas*, independent memorials of the square *kūṭa*-type with octagonal *grīvā* and *śikhara*. All of them contain bas-relief Somāskanda panels on their hind walls, as do the two principal shrines, where in addition there are fluted *liṅgas* installed on the floor.

The Vaikuṇṭha-perumāḷ temple built by Nandivarman Pallavamalla, also at Kanchi, is dedicated to Vishṇu. It is another large structure built of sandstone, with an admixture of granite in the top and bottom courses of the *adhishṭhāna*. It has a square four-storeyed *vimāna*, with all the storeys except the top one functional and containing three superposed *garbha-grihas*, to enshrine the three poses of Vishṇu—standing, sitting and reclining. This has been achieved by a system of three concentric walls, forming three concentric squares on the top of a moulded *adhishṭhāna*, the innermost wall rising to the height of the three storeys and enclosing the three tiers of cells. The intermediate wall rises to the roof-level of the second storey, while the outermost rises to that of the first. The first storey has its cella surrounded by two closed circumambulatories; the outer one functions as such,

SOUTHERN TEMPLES

while the inner one provides for two flights of steps, one on either side from the rear, giving access to the single closed circumambulatory round the sanctum of the second storey. The open outer ambulatory of the second floor is surrounded by a balustrade formed by the *hāra* of *kūṭas*, *śālās* and *pañjaras*. The intermediate wall extending up to the ceiling-level of the second storey and enclosing the closed circumambulatory round it carries on the top a similar *hāra*, forming the parapet edging the open circumambulatory round the third storey. The fourth storey, a slightly smaller square, is closed on all sides and carries the octagonal *grīvā* and *śikhara*, now much plastered, and a metal *stūpi* on top. The lowermost storey and the *ardha-maṇḍapa* in front are surrounded by a narrow open court at the level of the base of the *adhiśṭhāna*, the whole again surrounded by a pillared cloister. The wall of this cloister carries on the top a *hāra* of *kūṭas* and *śālās* at a level slightly lower than that of the first storey, so that when viewed from outside, the whole simulates in appearance a five-storeyed *vimāna*. This is the structural prototype, with one more storey added, of the monolithic copy seen in the Dharamrāja-ratha (above, p. 149). In addition to the numerous sculptures on the bayed walls of the storeys and the *maṇḍapa* in front and contemporary inscriptions, the most interesting content of this temple is a series of panelled sculptures narrating the history of the Pallavas from their legendary ancestors down to the rule of Nandivarman II Pallavamalla.

The Mukanda-Nayanār temple at Mahabali-puram is a plainer structure in hard stone, square and two-storeyed, with an octagonal *grīvā* and *śikhara* and a plain *ardha-maṇḍapa* in front. The *hāra* over the first storey, which extended over the top of the *ardha-maṇḍapa*, is partly lost, as also the

upper parts of the *śikhara*. There is a Somāskanda panel inside the shrine on the back wall, and the pilasters on the walls are simple with crude capitals.

The other interesting temples belonging to this period are the Mukteśvara and Mātangeśvara, Airāvateśvara, Vāliśvara, Iravātaneśvara and Piravātaneśvara, all at Kanchi, built mainly of sandstone with granite slabs forming the base and top of the *adhishṭhāna*, and the Olakkaneśvara on the top of the hill at Mahabalipuram, built of a greyish-white soft stone. All are composite varieties of a square *vimāna* with a varying number of storeys, where the upper storeys are non-functional and are closely girt by a *hāra* over the storey below and with different plans of the *śikhara* and *grīvā*. The Iravātaneśvara and Tripurāntakeśvara are two-storeyed, square throughout, including the *grīvā* and *śikhara*. The Mātangeśvara and Mukteśvara, square in their basal parts and three-storeyed, have a circular *grīvā* and *śikhara*. The Piravātaneśvara and Vāliśvara, square in their basal parts and with two and three storeys respectively, have an octagonal *grīvā* and *śikhara*. All of them carry low-relief sculptures on their walls.

But soon after, and perhaps in the first half of the long reign of Nandivarman, temples came to be built entirely of granite blocks, finely moulded, carved and sculptured, as seen in the granite *adhishṭhāna* of the brick temple of Vaikuṇṭha-perumāl and Sundaravarada-perumāl at Uttiramerur (Chingleput District), of the time of his successor Dantivarman; in the former the niches were meant to contain stucco figures and in the latter slab-reliefs.

The Viraṭṭaneśvara temple at Tiruttani (Chingleput District) is a very good example of a single-storeyed *vimāna*, square in its *garbha-griha* part and carrying an apsidal *grīvā* and *śikhara*. It was built

SOUTHERN TEMPLES

of hard black stone in the ninth century in the time of Pallava Aparājītarāman, one of the last rulers of the dynasty. It contains some good bas-reliefs fitted into its wall-niches and front face of the apsidal *śikhara*.

The apsidal *vimāna* in the compound of the Bhaktavatsala temple-complex at Tirukkalukkunram (Chingleput District) is a good example of the same apsidal type, perhaps a little earlier than the Vīraṭṭāneśvara. It is now shorn of its superstructure and is used as the treasury of the present temple.

9. UNDER THE EARLY PĀṆḌYAS

Following their rock-cut-temples and the single carved-out monolithic *vimāna* at Kalugumalai (above, p. 153), the Pāṇḍyas of the south continued in their homeland their architectural work much in the line of the Pallavas but with a slight admixture of Chāḷu-kyan traits. Though many of their structural temples are referred to in inscriptions in the area round about their capital Madurai, only a few are extant. The series of small all-stone temples, with elegant and simple plan and complete with *vimāna*, *ardha-maṇḍapa* and larger closed *mahā-maṇḍapa*, at Kaliyapati, Tiruppur and Visalur (Thiruchchirappalli District), are perhaps the early survivals of the Pāṇḍyan tradition. They have all square single-storeyed *vimānas* with simple moulded *adhishṭhāna* less than 2 m. square at the base and carrying on the top over the cella a square *grīvā* and *śikhara*. They have often eight small and elegant sub-shrines, dedicated to the ancillary deities (*aṣṭa-parivāra*) inside the enclosure-wall, disposed at the corners and the middle of each side and rear, the last, in the Śiva temples, dedicated to *nandi* coming to occupy a more central

UNDER THE EARLY PĀṆDYAS

place in front of the *mahā-maṇḍapa* and behind the small *gopura*-entrance. While all the rest are square on plan like the main *vimāna*, that on the middle of the south side, dedicated to the *sapta-mātrikās*, is rectangular of the *śālā* type. The *mātrikās* came to have a fixed position in the temple-plan of the later Pallavas, the Pāṇḍyas, the Muttaraiyars and the Early Chōlas and their vassals. The cult of Chāṇḍeśa, as the principal seneschal of a Śiva temple, had its beginnings from the time of Rājasimha Pallava and was by now crystallized, so that he occupied an honoured place in the pantheon as one in the *ashta-parivāra* till about A.D. 1000, when, in the time of Chōla Rājarāja, he, like *nandi* of earlier days, came to have a close proximity to the main *vimāna* on its northern side.

The Śiva temples at Tiruvāliśvaram and Korkai, both in Tirunelveli District, are best attributed to the Pāṇḍayas. They are all-stone temples, called *karrali* in contemporary and later inscriptions. The Tiruvāliśvaram *vimāna* (900-50) is a fine and elegant structure, noted for its fine relief-sculpture of rare iconography over its *prastara* and on the faces of its *hāra*-components. It is two-storeyed and square, with an *ardha-maṇḍapa* in front, carrying on the top an octagonal *grīvā* and *śikhara*, now renovated. This temple perhaps is the first to depict the well-known *ānanda-tāṇḍava* form of Śiva among its panels. The Akkaśālai temple at Korkai is, on the other hand, a much plainer structure of a later date. It has a single-storeyed *vimāna* with square *grīvā* and *śikhara*.

10. TRANSITION FROM THE PALLAVA TO THE CHŌLA STYLES

The Muttaraiyars, who held the territory on either side of the Kaveri in Thiruchchirappalli and

SOUTHERN TEMPLES

Thanjavur Districts, have left, in the wake of their own rock-cut cave-temples in this area (above, p. 147), a few structural temples of stone. An example is the *vimāna* of the Śiva temple at Kiranur (Thiruchchirappalli District) and another perhaps a larger and more interesting temple called in a late Pāṇḍya inscription Vijayālayacholiśvaram at Narttamalai near by. The latter was built, according to its foundation-inscription, by a chief called Śattanpūdi and was repaired soon after by another chief, when it was destroyed by a strike of lightning. Perhaps it then got its name after the founder of the Imperial Chōḷa line of Thanjavur (*circa* A.D. 850). It is a three-storeyed *vimāna* with a closed *ardha-maṇḍapa* of peculiar plan, standing on the slopes of a hill, surrounded by *asthṭa-parivāra vimānas*, all square on plan except the one on the south for the *saptamātrikās*, which is rectangular, and with a small *gopura*-entrance near the north-east corner of the *enclosure*-wall. The first storey of the *vimāna* has a double wall, the outer square and plain but relieved at intervals and adorned only by pilasters, over a moulded *adhishṭhāna* and the inner circular with a circumambulatory in between. The circular *garbha-griha* opens into the pillared *ardha-maṇḍapa*, which is a smaller square than the main *vimāna*. Two rows of three pillars each divide the *maṇḍapa* into a central nave in front of the shrine-entrance and two lateral aisles in continuity with the closed circumambulatory. The *maṇḍapa* is closed on all sides and has its entrance guarded by two *dvāra-pālas* placed in the niches on either side, enclosed by pilasters. The *hāra* on the square outer wall of the *vimāna* extends over the roof of the *maṇḍapa* in front, as in the Chāḷukyan examples, and contains panels of sculpture illustrating dance-poses. The second

storey, also square on plan, rises over the first storey on four piers built at the corners against the circular wall below and carries a *hāra* on its top. The third storey is circular, carrying a *nandi* at each of the four corners and a circular *grīvā* and circular *śikhara* in the centre. It is a Pallavas-type *vimāna*, since it lacks the *śuka-nāsikā* characteristic of the Chālukyan. Like the contemporary temples of the Later Pallavas and the Pāṇḍyas, it carries in the southern niche of its *grīvā* a sculpture of Dakṣiṇāmūrti Śiva—which, with others, became an invariable feature of the southern Śiva temples.

The Western Gaṅgas, who had their capital at Talkad in the southernmost part of Mysore, have left a few contemporary temples, all in hard stone, much resembling their Pallava compeers, differing from them only in details. The earliest, perhaps of the ninth century, is a group of twin single-storeyed Jaina *vimānas* on the Chandragiri hill at Sravana-Belgola (Hassan District). Built of granite, they are of small size, about 2 m. square at the base, standing at either end of a rectangular *adhishṭhāna*, their hind walls extended over the intervening gap and forming a square flat-roofed cell in between. All of them open into a common rectangular *ardha-maṇḍapa*. The *grīvā* and *śikhara* of either *vimāna* are square without a *śuka-nāsikā*. In front of this structure and closing its *ardha-maṇḍapa* façade is a perforated soapstone screen of the twelfth century, containing some fine narrative sculpture in miniature panels. A more impressive structure is the Chāvūṇḍarāya-basti (circa 982-95), a three-storeyed *vimāna*; its two lower storeys are functional and contain two superposed *garbha-grihas* enshrining Jaina *Tīrthaṅkaras*. The lower storey is surrounded by a double wall, the outer one continued

SOUTHERN TEMPLES

forward to enclose a coeval closed *maṇḍapa* in front, preceded by a pillared porch added in Hoysala times. The whole structure stands on a moulded *adhiṣṭhāna*, relieved and recessed on plan as are the walls above. The *hāra* over the *prastara* of the outer wall of the *vimāna*-part, composed of well-formed *kūṭas*, *śālās* and *pañjaras*, is extended over the edge of the *maṇḍapa* roof, also enclosing a narrow open circumambulatory round the second storey and an open court in front of it. The second storey itself with an open circumambulatory, enclosed by the *hāra* of the first storey, carries in turn a *hāra* of four *karṇa-kūṭas* and four *bhadra-śālās*. The third storey, closed on all sides and non-functional, is a smaller square carrying an octagonal *grīvā* and *śikhara* with a *stūpi* as its finial. The *maṇḍapa* is of the *navaraṅga* type, with four polished, but not lathe-turned, central pillars, circular in section, carrying full capitals of the order. The twelve outer ones are of the type found in the cave-temples of the later Pallavas (above, p. 142), square at the base and the top and octagonal in between.

The most interesting monument in the Sravana-Belgola complex is the colossal finely-polished statue of standing Gommaṭeśvara, carved out of a standing tor of granite on the crest of the Indragiri hill. This was the work of Chāvuṇḍarāya, the minister of the Gaṅga king Rāchamalla Śatyavākya (974-84). Being free-standing, it is even more interesting than the colossus of Ramses II at Abu Simbel, Egypt, its total height from head to toe being 17·5 metres. The colossus is surrounded by a pillared cloister of granite built by Gaṅgarāja, the minister of Hoysala Viṣṇuwardhana, while the *maṇḍapa* abutting the colossus was built by another minister, Baladeva, in the twelfth century.

PALLAVA-CHOḢA TRANSITION

The Gaṅga temple at Kambadhalli, which is not far from Sravana-Belgola, is interesting on account of the fact that the original three *vimānas*, built of granite and opening into the three sides of the *maṇḍapa* in *tri-kūṭa* fashion, have respectively a square, octagonal and circular *grīvā* and *śikhara*. There is an open pillared porch in front of the *maṇḍapa* on its northern side. To this complex have been added two more lateral *vimānas* to the front of the porch, connected by a *maṇḍapa* in between. The whole complex is enclosed by a wall with a small *gopura*-entrance in front.

The granite temples at Nandi (Kolar District), the capital of the Bāṇas, are of Gaṅga extraction. The small *vimāna* called Yoga-Nandīśvara on the top of the hill, perhaps the earliest here, is not of much architectural interest. In the large temple-complex at the foot of the hill the two principal *vimānas*, the Bhoga-Nandīśvara and Aruṇāchaleśvara, standing side by side, are supplemented, by a later complex of axial and peripheral structures—*maṇḍapas*, cloisters, enclosures and *gopuras*. Of the two, the Bhoga-Nandīśvara, evidently a renovation in granite of an earlier structure, is more ornate and interesting. The Aruṇāchaleśvara is almost a copy of the former and later in point of time. Both are connected by a screen-wall of the same period in about the middle of their *maṇḍapa*-lengths. The Bhoga-Nandīśvara is a three-storeyed *vimāna*, square from the base to the *śikhara*, with *ardha-maṇḍapa* in front. The *hāra*, of fully-formed *kūṭas*, *śālās* and *pañjaras*, contains fine sculpture and extends over the roof-edges of both the *maṇḍapas*. The second storey too carries the characteristic *hāra* and the third *nandis* of black polished stone at the four corners of its roof and a square *grīvā* and *śikhara*,

SOUTHERN TEMPLES

the niches on the faces of which contain appropriate sculptures in black polished stone.

11. UNDER THE CHOLAS

The Imperial Cholas of Thanjavur succeeded to the hegemony in the south in about the first half of the ninth century after the displacement of the Pallavas and eventually of the Pāṇḍyas. They continued the tradition of temple-building, with many improvements in the technique, use of the hard stones and equally good but more embellished sculpture which became bolder and still later came to be almost in the round. This period marks the peak of temple-building activity, when numerous earlier temples of brick-and-timber were renovated in stone and more were built at all places hallowed either by the visits of Śaiva and Vaishṇava saints or in their laudatory hymns.

A typical early Chola temple-unit is the Sundarēśvara at Tirukkattalai (Thiruchchirappali District). It is a complete unit built of stone throughout and consists of the main square two-storeyed *vimāna* with the *ardha-maṇḍapa* surrounded by the *aṣṭa-parivārālaya*, all inside an enclosure-wall, with a *gopura* in front. The *maṇḍapa* in front of the *vimāna* is a later addition. The temple was built in the time of Āditya I in 873. The main *vimāna* of the Nāgeśvara at Kumbakonam (Thanjavur District) is of the same period and contains exquisite sculpture in its niches. The other parts of the temple belong to later periods.

While these early Chola temples and their contemporaries retain the essentials of the Pallava temples, they also show certain transitional features in some components, e.g., the corbels: in most cases

UNDER THE CHOLAS

the corbels retain the *tarāṅga*-form with a curved profile but with a hollow moulding in place of the roll at the bend; or alternatively they are plain, angular and bevelled, as in the Pāṇḍya cave-temples (above p. 146).

The Korāṅganātha temple at Srinivasanallur (Thiruchchirapalli District) is an elegant example of the time of Parāntaka I (907-55). It is a square *vimāna* with a *maṇḍapa* in front and contains fine sculpture and rich miniature panels above and below them. Its superstructure, as extant, is of brick.

The great temple in Thanjavur, appropriately called the Bṛihadiśvara (pl. LXVI) or the Rājarāja-śvara after its builder Rājarāja I (985-1014), is conceived as a whole complex on a grand scale, completed by its founder and is the most ambitious undertaking of Tamil architecture. It combines all that is mature and best in the temple-building tradition—architecture, sculpture, painting and allied arts. It is a large complex, with an enormous monolithic *nandi* on a pedestal in front, sheltered under a much later *maṇḍapa*. It has the loftiest known *vimāna*, 60 m. high, standing over a basal square of about 30 m. side, which forms an appropriately high and amply-moulded platform, and carries the more boldly-moulded *adhishṭhāna* of the *vimāna*. The same platform and *adhishṭhāna* are extended forward as basal members of the *ardha* and *mahā-maṇḍapas* connected to the main *vimāna* by a north-south transept. The pillared *mahā-maṇḍapa*, with a central nave and two raised aisles, is closed on the sides with the only entrance on the east. The wall of the basal part of the *vimāna* rises vertically to a height of about 15 m. in two storeys, demarcated horizontally at their junction by a bold cornice, and encloses an inner circumambulatory between it

SOUTHERN TEMPLES

and the inner wall of the *garbha-griha*, which also rises to the height of both the storeys to accommodate the colossal *liṅga* and its great pedestal.

The outer wall is externally relieved five times on each face, as the *adhishṭhāna* below, the central wider ones on the north-west and south sides having large door-openings, one over the other, for both storeys of the circumambulatory. These, in addition to the larger opening on the east, make the *vimāna* a *chaturmukha* structure. The other bays contain niches with different icons in bold relief. The recesses in between are adorned by short pilasters carrying shrine-motifs (*pañjara-fronts*) on the top, the so-called 'decorative pilaster' characteristic of the period. The main pilasters cantoning the corners of the bays and walls are square with full capitals, the abacus as in the earlier Pallava structures, still being large, massive and square, but the corbel-arms are bevelled with a central tenon on their faces. The inner wall of the lower storey has on its three sides more than life-size sculptures of Śiva seated on the south and dancing on the west and of Devī on the north. The lower closed circumambulatory contains over the rest of the walls on either side extensive mural paintings of the Chōḷa period, overlaid by later Nāyaka palimpsests of the seventeenth century. The Chōḷa paintings form a fine gallery of great artistic merit and iconographic interest. The upper circumambulatory, also closed, contains on the face of its inner wall a series of one hundred and eight panels, all, except the last twenty-seven with completed reliefs, depicting Śiva in the various poses of dance in accordance with Bharata's *Nāṭya-śāstra*.

By a system of corbelling the two walls of the circumambulatory are made to meet each other at

UNDER THE CHOḢAS

the top level of the third storey, from which point rises the rest of the pyramidal superstructure of the soaring *vimāna* of sixteen storeys, the traditional maximum. Each storey carries *hāras* of *kūṭas*, *śālās* and *pañjaras* and the topmost four *nandis* at the four corners and an octagonal *grīvā* in the centre crowned by an octagonal *śikhara*. On the front side the storeys up to the level of the fifth storey are slightly extended forward over the tiered *ardha-maṇḍapa* below. Internally the *vimāna* is a corbelled hollow throughout up to the base of the *stūpi*.

Enclosing the wide open court around is a two-tiered compound-wall with pilasters at intervals, the tiers themselves being marked off externally by a bold horizontal *kapota*. On the eastern side the compound-wall has a massive but short *gopura*-entrance. Ranged inside the enclosure-wall is a continuous two-storeyed cloister divided by a row of pillars behind the façade-columns into a frontal continuous corridor and a rear section stringing a series of thirtysix two-storeyed sub-shrines. The sub-shrines at the four corners and the middle of each of the three sides are dedicated to the appropriate *dik-pāla*, the eighth finding a place in one of the four shrines in the two tiers flanking the inner end of the eastern entrance. In front of the *gopura* is a second outer and larger *gopura* incorporated into a later fort-wall. In addition to the inner *gopura* on the east, the compound-wall is pierced by three more smaller entrances of the *torāṇa* variety, framed by overdoors with *śākhās* and crowned by horizontal lintels. Just to the north of the transept is a smaller *vimāna* of Chaṇḍikeśvara adjoining the large gargoyle-like water-spout of the main *vimāna*, supported on the head of a squatting *bhūta*, both of which became characteristic of temples from this

SOUTHERN TEMPLES

time onwards. These were new norms, perhaps set by Rājarāja. The other *vimānas* and *maṇḍapas* inside the court are of later periods, e.g., the Amman shrine to the north of the *nandi*, which is of the late Chōla period, and the Gaṇeśa and Subrahmanya temples on the south-west and north-west, the latter a fine specimen of Nāyaka architecture (below, p. 239).

Apart from sculptures, some of them of immense iconographic interest, paintings and illustrations of dance and music, of which this temple is a unique repository, its long and well-inscribed epigraphs are most interesting and informative of the history of the temple, its builders and donors and the endowments of jewels, bronzes and other paraphernalia.

The Bṛihadiśvara, begun about 1003 and completed by 1010, is the *magnum opus* of the Chōlas. This was closely followed within about twenty years by another magnificent Chōla structure, also called the Bṛihadiśvara, built almost on the same plan and model by Rājendra I Chōla (1012-44), the worthy son and successor of Rājarāja, in his new capital of Gangaikondacholapuram (District Thanjavur), which he founded after his great victories and expeditions to the north up to the Ganga. This temple-complex had only two entrances, a *gopura* on the east and a plain *torana*-door on the north. While a great part of the enclosure-wall, the superstructure of the *gopura* and the entire two-storeyed cloister inside were pulled down in the last century to supply stones for the construction of a neighbouring river-dam, the *vimāna* and its axial *maṇḍapa* are fortunately extant and intact. The *vimāna* is of lesser height and dimensions, with a lesser number of storeys than that of its predecessor at Thanjavur, but the sculpture, bold and almost cut out in the round, is perhaps of greater excellence.

UNDER THE CHOĻAS

The Rājarājeśvara, now called the Airāvateśvara (pl. LXVII) at Darasuram (Thanjavur District), built by Rājarāja II (1146-73), and the Kampahareśvara at Tribhuvanam (same District), built by Kulottuṅga III (1178- 1223), are examples of the great temples of the later Choḷas, before the later Pāṇḍyas supplanted them by the middle of the thirteenth century. The later Choḷa and the later Pāṇḍya temples, as exemplified by these two, revert to brick-built superstructure over the *vimānas* and *gopuras*, while their basal parts, as also the *maṇḍapas*, axial and peripheral, cloisters and the like, are all of stone. The temples of this and subsequent periods incorporate in their original plan and composition a new and significant addition introduced late in the time of Rājendra I, viz., the *Tirukkāmakotṭam* or the Amman shrine. Assigned a defined location in the complex, it is a separate *vimāna*, usually of the *śālā* type, with *maṇḍapas* dedicated to Devī, as the divine consort of the principal god, Śiva or Viṣṇu or others as the case may be, the Devī or Amman having a local name in consonance with that of the principal god. From then such Amman shrines have been added to the earlier temples initially without them, e.g., the two Bṛihadiśvaras. The *gopura* or temple-entrance, either singly or in a series, in the front, rear and sides of the enclosure-wall, also becomes a major feature in the composition and attains greater dimensions progressively, so that it overtops the *vimāna*, which from the times of the Pallavas till about 1100 dominated the entire composition. Towards the end of this period, and before the Vijayanagara times, the 'decorative pilaster' adorning the walls of *vimānas* and *gopuras*, as in the *Bṛihadiśvara* and other temples, came to develop bases of *pūrṇa-ghaṭas* or full vases of plenty with

SOUTHERN TEMPLES

ēxrescent foliage and are called *kumbha-pañjaras*. The central tenon of the corbel also takes the form of a moulded campanulate pendentive tending to become floral and anticipating the incipient *madalai* of the *pushpa-potika* characteristic of Vijayanagara times. The abacus of the pillar-and pilaster-capitals is thinner in contrast to the large square and thick Pallava and early Chōḷa examples. The octagonal *grivā* and *śikhara* of the southern style, which among others were more common in Pallava and early Chōḷa times, now become the general norm of the southern temples, though the square and circular styles are occasionally and the apsidal style still more rarely seen.

The Airāvateśvara seems to have had originally more than one enclosure, of which the outer ones except for the outermost *gopura* on the east are now lost. The innermost enclosure with *gopura* in front, with large parts of the double-storeyed cloister inside, is intact. The main axial complex has the same plan as the Bṛihadīśvara, though of lesser dimensions, but more ornate with bold and round sculpture and miniature narrative panels in relief. The larger sculptures are in a new medium, viz. black polished basalt-like stone, in contrast to the granite of the structure. The main *vimāna* rises in five storeys, the upper ones in brick. The closed *mahā-maṇḍapa* has in front an *agra-maṇḍapa* with ornate pillars, open except for the Amman shrine on its north, while on its south is a pillared porch; the whole is designed to simulate a chariot on wheels drawn by elephants.

The Kampahareśvara is very much like the Airāvateśvara including its wheeled porch and its ornate pillars—*chitra-kamba*. In both the cases, the lowermost *hāra* extends over the roof of the *ardha-maṇḍapa*

UNDER THE CHOŁAS

as in the Chālukyan forms. The Amman and Chaṇḍikeśvara shrines, again as in the Airāvateśvara, are coeval with the main *vimāna*. This temple is a veritable gallery of sculptures of varied iconography, including some fine dance-poses. Of the two main *gopuras*, the inner one and the rear one on the west are ruined on the top, but the outer eastern one is complete and is a tall and fine structure characteristic of the times.

The Sundara-Pāṇḍyan *gopura* to the east of the Jambūkeśvara temple at Thiruchchirappalli is a classical example of a Pāṇḍya *gopura*. Other typical late Choḷa and Pāṇḍya *gopuras* are seen in the temples at Chidambaram and Tiruvannamalai. These, with the subsequent Vijayanagara and Nāyaka additions, enlarged many of the south Indian temples, which had started in Pallava and early Choḷa times only with their principal *vimānas* and *maṇḍapas* but now grew in size, as instanced by the Raṅganātha temple at the large temple-city of Srirangam (District Thiruchchirappalli), with its seven enclosure-walls and numerous *gopuras*, *maṇḍapas*, cloisters and *vimānas*.

On either bank of the Kaveri in Thiruchchirappalli District, the Irukkuveḷ chiefs, who were the allies and political subordinates of the early Choḷas of Thanjavur, have left a series of interesting all-stone temples in their capital-city of Kodumbalur. Of them the Mūvar-kōvil is the most interesting from the point of view of architecture and sculpture. It is a complex of three tall granite-built *vimānas* in a row, all two-storeyed and square on plan from the base to the *śikhara*, and with stone *stūpis* and *ardha-maṇḍapas* in front. The central and southern *vimānas* are extant, while the remains of the northern are indicated by the moulded *adhishṭhāna*. There

SOUTHERN TEMPLES

were a common but detached rectangular *mahā-maṇḍapa* in front and sixteen detached *parivāra*-shrines all round, now represented only by their basements. The complex was enclosed inside a wall with a small *gopura*. The *vimānas* carry on their walls and niches some of the finest early Chōḷa sculpture.

12. UNDER THE VIJAYANAGARA RULERS

The Vijayanagara empire, which encompassed practically the whole of the peninsula soon after its advent in the middle of the fourteenth century, in the wake of the early Muslim inroads into the south, continued the tradition left by the later Chāḷukyas, later Chōḷas and Pāṇḍyas. In their northern domains, they inherited the traditions of the Chāḷukyas as developed till then under the intervening dynasties, while in the south they took up almost from where the later Pāṇḍyas had left. Thus, their northern temples in the Deccan and Āndhra region retain much that was of the Chāḷukyan inspiration, while their more southern constructions continued the traits of the Pallava-Chōḷa-Pāṇḍya architecture. But at all the places they stuck to the hard-stone tradition, carrying it, as it were, from the south to the Chāḷukyan area, which earlier had a predilection for softer stones. In their now-ruined capital at Hampi (District Bellary), there are numerous temples of either variety. Their subsequent capitals and their environs, at Penukonda (Anantapur District), Chandragiri (Chittor District), Vellore (North Arcot District) and numerous other places from the Godavari to Kanniyakumari, contain many more temples, large and small. In fact, their reign witnessed a greater activity in temple-building than

UNDER THE VIJAYANAGARA RULERS

there had been in the times of the Cholas, and some of their temples are remarkable for the great size of their component structures—*maṇḍapas* and *gopuras*. The pillars and pilasters have now more elegant shafts, the lower part of the abacus, which was a plain *doucene* in the Pallava and early Chola periods and got scalloped into petals in the later Chola, develops still more into a floral form with the petals—*idaḷ*; the corbel or *potika* has evolved into the characteristic *pushpa-potikā*, with a double-flexed arm extending from the main block and scalloped at the free-hanging extremity into everted petals with an incipient bud or torus hanging at the centre. The flexed arm has a straight horizontal bar connecting its free tip with the main block. The *kumbha-pañjara* in all its elaboration becomes another characteristic feature of the Vijayanagara and later temples. The cornice, till now thick and curved down, becomes larger, thinner and with a double flexure extending far forward and often with monolithic stone chains hanging from the corners, as in the *kalyāṇa-maṇḍapa* in the Varadarāja temple at Kanchipuram. Such *kalyāṇa*-and other *utsava-maṇḍapas* are halls for the celebration of temple-festivals, with fine and intricately-worked colonnade, often with attached small pillars or animal and human sculpture—the *aṇiyotṭikkāl*. The Vijayanagara contribution to pre-existing temples was mainly in the form of tall and massive *gopuras*, called *rāya-gopuras*, some times as many as eleven storeys high, as in the Ekāmrānātha temple at Kanchi, and in the temples at Tirivanamalai (North Arcot District) and Kalahasti (Chittoor District), built by the great emperor Kṛishṇa-deva Rāya (1509-29).

Among the many large Vijayanagara temples at Hampi, such as the Pampāpati and Virūpāksha,

SOUTHERN TEMPLES

which started from a late Chālukyan nucleus, and the Paṭṭābhirāma, the Hazāra-Rāma and Viṭṭhala, the last two may be taken as examples of wholly Vijayanagara structures, one with Chālukyan traits and the other predominantly of the more southern type.

The Hazāra-Rāma temple had probably been begun earlier and was completed by Kṛishṇadeva Rāya. The temple is devoid of the characteristic *gopura*. The *mahā-maṇḍapa* is of the pattern of the Chālukyan *navaraṅga*, with its four central pillars, though square, polished and embellished with sculpture and carvings. The walls of the main *vimāna*, as also those of the adjoining Amman shrine and the enclosure, are replete with panel-sculpture. More characteristic is the *śuka-nāsikā* in front of the superstructure.

The Viṭṭhala temple (pl. LXVIII), a large complex planned and built at one time, is typical of the southern form of *vimāna* temples with axial additions of *maṇḍapas* including the *agra-maṇḍapa* with composite columns and peripheral *maṇḍapa*, subshrines and *gopuras* including a *Garuḍa-maṇḍapa* in front of the court, which is a *vimāna* fashioned in the form of a chariot with stone wheels.

13. UNDER THE NĀYAKAS

After the fall of the central power the Vijayanagara viceroys in the southern regions, called Nāyakas, assumed independent powers at Gingee, Thanjavur and Madurai in Madras State and Ikkeri in north-west Mysore. Of these the Madurai and Thanjavur Nāyakas have perhaps contributed more to temple-building and other structural activity than the other two lines. The Nāyakas added elaborate

UNDER THE NĀYAKAS

maṇḍapas of the hundred-pillared type and larger *gopuras* with a greater number of plastic stucco figures, as at Vellore (pl. LXIX) and Madurai, their tallest *gopura* being at Srivilliputtur (Ramanathapuram District). The closed *prākāra* or ambulatory flanked on either side by massive columns, with elaborately-corbelled brackets spanning the gap above and nearly meeting each other, built in the Nāyaka and later times, is exemplified by the well-known corridor in the temple at Rameswaram (District Ramanathapuram). The fine *kalyāṇa-maṇḍapa* at Vellore and a similar *maṇḍapa* in the northern *prākāra* of the Srirangam temple (pl. LXX) with the façade-columns carrying full-size monolithic sculptures of rearing horses with riders and retinue and other animal figures, are the notable contribution of the Nāyakas. Much of the large temple-complex at Madurai is of Nāyaka origin, including the great *maṇḍapas* and towering *gopuras* on all the four sides. The Subrahmaṇya temple, a fine *vimāna* with *ardha*-and *mahā-maṇḍapas*, standing in the north-west of the court of the Bṛihadīśvara temple at Thanjavur (above, p. 232), is a typical example of the Nāyaka temple of the ornate variety. Built of fine-grained granite it exhibits in the mouldings of its *adhishṭhāna* and the pilasters of its wall some intricate and chased work. It has the characteristic *pushpa-potika*, the *kumbha-pañjara* and the double-flexed cornice, in addition to other typical features. These temples form the pattern for the living art of the modern temple-builder or *sthapati* of south India.

14. THE WEST COAST

The temples of Kerala and the west coast in general, though essentially similar in parts to the

SOUTHERN TEMPLES

southern temples, are adapted to the high rainfall and make use of the timber which is plentiful in the region. While the *adhishṭhāna* is built of moulded stone, the walls are mostly of laterite blocks. The roof is supported by timber-beams and joists, and the roofing was originally of laminated overlapping, so to say clinker-built, wooden planks; it is this very system that has been imitated in the stone copies where stone slabs are made to overlap one another in the sloping roof, as in the Lād-Khān and other temples at Aihole and the temples of Konkan and Kanara (above, p. 193). While in many other cases the roof is tiled, in still others the roofing was of copper or brass sheeting. The usual plans—square, rectangular, circular and apisdal—are met with, and in simple cases the roof or *śikhara* comes directly over the walls, without an intervening *prastara* or *grīvā*, seen in the Pallava Draupadī-ratha at Mahabalipuram (above, p. 149). Where the *vimāna* is storeyed, the system of concentric walls rising to the respective heights, as is seen in the Dharmarāja-ratha at Mahabalipuram (p. 149) and the Vaikuṇṭha-perumāl at Kanchi (p. 219), is adopted, with sloping and not horizontal roofs over the various ambulatories. Alternatively, a system of pent roofs at different heights on the walls, held by brackets sprung from the wall, is followed. The *nāsikās* (gables or dormers) are generally of a triangular shape, though examples of the vaulted type, with the front masked by a *torāṇa*-arch locally known as *kiḷivāśal*, are also known. Many of the Kerala temples contain interesting mural paintings of the seventeenth to nineteenth centuries.

K. R. SRINIVASAN

ISLAMIC MONUMENTS ¹

CONTENTS

	PAGE
1. Muslim invasion of India ...	242
2. Main features of Indo-Islamic architecture ...	243
3. Monuments of the Delhi Sultans ...	246
A. The Mamlūk dynasty (1206-90) ...	246
B. The Khaljī dynasty (1290-1321)...	250
C. The Tughluq dynasty (1321-1414) ...	252
D. The Sayyid dynasty (1414-44) ...	257
E. The Lodī dynasty (1451-1526) ...	259
4. Monuments of the provincial kingdoms ...	262
A. Panjab (<i>circa</i> 1150-1325) ...	263
B. Bengal (<i>circa</i> 1200-1550) ...	264
C. Jaunpur (<i>circa</i> 1360-1480) ...	268
D. Gujarat (1297-1572) ...	271
E. Malwa (1401-1561) ...	278
F. The Deccan (1325-1687) ...	283
G. Khandesh (1388-1601) ...	293
H. Kashmir (1346-1589) ...	294
5. Monuments of the Sūr and Mughal dynasties ...	297
A. Bābur (1526-30) ...	298
B. The Sūr dynasty (1538-55) ...	298
C. Humāyūn (1530-38 and 1555-56)...	303
D. Akbar (1556-1605) ...	306
E. Jahāngīr (1605-27) ...	312
F. Shāhjahān (1628-58) ...	315
G. Aurangzeb (1658-1707) ...	322
H. The Later Mughals (1707-1857) ...	324
6. Monuments of the Nawabs of Oudh and Sultans of Mysore ...	325
7. Other forts and palaces ...	326

¹For places mentioned in this chapter see map, fig. 5, p. 328.

ISLAMIC MONUMENTS

1. MUSLIM INVASION OF INDIA

COMMERCIAL INTERCOURSE BETWEEN INDIA AND Arabia had existed earlier, but it was early in the eighth century that the Arabs conquered Sind and established some small principalities there. In the closing years of the tenth century Maḥmūd of Ghazni invaded India for the first time and repeated his expeditions several times, plundering cities and temples, including the famous temple of Somnath in Gujarat. The Rajput rulers of northern India, who opposed him, were all vanquished by him. But during the reign of his successors, not only did India slip out of their hands, but their control over Ghazni itself became weak and it came under the sway of the princes of Ghūr, a province between Ghazni and Herat.

In 1175, Muḥammad, brother of Ghiyāthu'd-Dīn Sultan of Ghūr, invaded Multan and gradually annexed Sind and Panjab, the latter from the descendants of Maḥmūd of Ghazni. In 1191 he made a powerful thrust into India, which was repulsed at the famous battle of Taraori by a confederacy of Rajputs under the Chauhān prince Prithvīrāja. In the following year, however, Prithvīrāja was captured and slain by Muḥammad Ghūrī on the same battlefield.

Muḥammad then retired, leaving the campaign in the hands of Qutbu'd-Dīn Aibak, his favourite slave from Turkeṣtān. Qutbu'd-Dīn occupied Delhi, Prithvīrāja's capital, and soon swept across Kannauj, Gwalior, Gujarat, Bihar, Bengal and Bundelkhand. At the death of Muḥammad in 1206, Qutbu'd-Dīn enthroned himself at Lahore as the first Sultan of Delhi.

INDO-ISLAMIC ARCHITECTURE

2. MAIN FEATURES OF INDO-ISLAMIC ARCHITECTURE

The conquest of India by the Muslims made an effective and distinct impact on the indigenous expressions of life and culture, which gave rise, among other expressions of art, also to a new style in architecture. This style incorporated not only certain new modes and principles of construction but reflected also the religious and social needs of the adherents of Islam.

In the Brāhmanical, Buddhist or Jaina constructions, spaces were spanned either by beams or by courses of bricks or stones laid in corbels, so that the open span was gradually reduced to a size which could be covered with a single slab. Although there exists some evidence to suggest that the true arch may have been known in India earlier, it is the Muslims who are believed to have brought with them the principle of building a true arch, so that the bricks or stones could be laid as voussoirs to reproduce a curve and thus span the space between columns or walls. In any case, even if the true arch was familiar to indigenous architects in ancient times, it was re-introduced by the Muslims and firmly implanted on the soil. The result was that flat lintels or corbelled ceilings were replaced by arches or vaults, and the pyramidal roof (*pīḍhā*) or spire (*śikhara*) by the dome. The necessity of raising a round dome over a square construction introduced multiplication of sides and angles by providing squinches, so that a base with many sides, usually sixteen, could be obtained to raise a circular drum for the dome. A sunshade or balcony was laid on cantilever brackets fixed into and projecting from the walls, which introduced the *chhajja* (eaves or sunshade). Brackets

ISLAMIC MONUMENTS

with richly-carved pendentives, described as stalactite pendentives, lent them fascinating ornamentation when they were intended to serve as balconies. Kiosks (*chhatrīs*), tall towers (*minārs*) and half-domed double portals are some of the other distinguishing features of Indo-Islamic architecture.

The difference between the lay-out of a temple and a mosque is explained by the essential difference between the Hindu and Muslim forms of worship and prayer. A cella to house the image of the deity (*garbhā-griha*), and often small halls in front for the worshippers (*mandapa*), were regarded adequate for a simple Hindu temple. But the Islamic form of worship, with its emphasis on congregational prayer, requires a spacious courtyard (*siḥn*) with a large prayer-hall at its western end. In the rear wall of the prayer-hall, the centre is occupied by a recess or alcove, called *mihrāb*, and indicates the direction of prayer (*qibla*). A pulpit (*mimbar*) to its right is meant for the *Imām* who leads the prayer. A tower or minaret, originally intended for the *mu'azzin* to call the faithful to the prayer, later assumed a mere architectural character. A gallery or compartment is sometimes screened off in a corner of the prayer-hall or in some other part to accommodate the ladies who observed *purdah*. The main entrance to a mosque is on the east, and the sides are enclosed by cloisters (*liwāns*). A tank is provided for ablutions usually in the courtyard of a mosque.

The practice of the burial of the dead, as distinct from cremation practised by the Hindus, introduced the tomb. A domed chamber (*hujra*) with a cenotaph (*zarīḥ*) in its centre, a *mihrāb* in the western wall, and the real grave (*qabr*) in an underground chamber (*maqbara*) constitute the essential elements of a tomb. In larger and more complex tombs,

INDO-ISLAMIC ARCHITECTURE

there is also a mosque, and in later tombs a well-planned garden. The entrance to the mortuary-chamber is usually from the south.

The mode, theme or motifs of ornamentation employed in Islamic buildings also made a departure from the earlier Hindu vogues. The indigenous ornamentation is largely naturalistic, delineating with a conspicuous zest human and animal forms and the luxuriant vegetation-life characteristic of a tropical country. Among the Muslims the representation of living beings was forbidden by scriptural injunction, and so they took recourse to execution of geometrical and arabesque patterns, ornamental writing and a formal representation of plant and floral life, reflecting in its scantiness the nature of the country where Islam was born.

Lucidity and simplicity of expression, economic use of material and orderly arrangement characterize the Islamic art, as distinct from the exuberance, richness and exaggeration of Hindu art. The ornamental designs in Islamic buildings were carved on stone in low relief, cut on plaster, gilded, painted or inlaid. Muslim ornamentation even on stone or other base in effect is not much different from embroidery. Striking colour-effect was often obtained by encaustic enamel on tiles.

Lime was known earlier in India, but its use was very limited, mud being used for brickwork, while large blocks of stone were generally laid dry and secured with each other by means of iron clamps. The Muslims, on the other hand, made an extensive use of lime, which served not merely as a binding-medium, but also as plaster and a base for incised decoration and encaustic enamel-work.

After the initial reaction manifesting itself in the desecration, destruction and spoliation of the

ISLAMIC MONUMENTS

earlier Hindu structures the creative monumental activity of the Muslims is marked by two phases. In the first phase, the earlier Hindu temples or other buildings were purposefully demolished and the material used for new improvised buildings. In the later phase, mosques, tombs and other buildings were thoughtfully planned and built with appropriate material, which was originally quarried, manufactured or ornamented as necessary. It is in this phase that Muslim buildings are found at their best.

Indo-Islamic architecture falls under three broad phases. The monuments erected by or under the patronage of the Delhi Sultans belong to the first phase. Contemporaneously, at least in part, monuments were also coming up in the different provinces, which were originally ruled by governors appointed by the Sultans, but which soon declared themselves independent. These exhibit a diversified but distinct phase. To the third phase belong the constructions of the Mughals, who brought India again under an almost united suzerainty.

3. MONUMENTS OF THE DELHI SULTANS

From Qutbu'd-Din Aibak's rise till the conquest of India by the Mughals, five main dynasties ruled from Delhi. Rulers of these dynasties raised a large number of buildings, which make it possible to view the development of Islamic architecture in India as a growing and continuous movement.

A. THE MAMLŪK DYNASTY (1206-90)

Most of the important buildings of the Mamlūk (or Slave) dynasty, with the only important exception

MONUMENTS OF THE DELHI SULTANS

of the Arhāi-Din-kā-Jhonprā mosque at Ajmer, were erected at Delhi. In their iconoclastic zeal the Mam-lūk conquerors laid the Hindu temples waste, but in spite of their knowledge of their characteristic principles of construction, which were to exercise a far-reaching effect in course of time, they were confronted with a lack of workmen familiar with their methods. The result is that a sense of uncertainty and improvisation permeates through the buildings of the Slave dynasty, some of which have, in fact, been built with architectural material from demolished Hindu temples. The use of architrave, lintel or corbelled courses continued, and, in fact, the hand of Hindu craftsmen is particularly apparent in surface ornamentation. Although a homogeneous principle of construction and ornamentation is lacking in these buildings, the product is often marked by grace and strength.

In the centre of the Rajput citadel of Lāl-Koṭ at Delhi, which was occupied by Qutbu'd-Dīn, and which with its extension into the later Qal'a Rāi Pithora is known as the first city of Delhi, he demolished twentyseven Hindu and Jaina temples, and with their carved columns, lintels, ceiling-slabs and other members raised regular cloisters to enclose a rectangular area, which was named the Quwwatu'l-Islām ('Might of Islam') mosque and completed in 1197. After a short time he threw a massive stone screen in front of the prayer-chamber along the western wall. This imposing screen with five graceful arches, the central one being the highest, is not built on the true arch principle but by corbelling the successive courses, although there is a faint attempt to lay the stones in the fashion of voussoirs near the apex of the arch. In the ornamentation of this screen with its serpentine tendrils and undulating leaves, the

ISLAMIC MONUMENTS

hand of craftsmen used to Hindu motifs is clearly perceptible.

An iron pillar, 7·20 m. high and 32 cm. to 42 cm. in circumference, stands in the courtyard of the mosque. It was, however, brought to Lāl-Koṭ, according to bardic tradition, by Anangpāl, the Tomar prince who built the citadel. An inscription on it, engraved in characters of the fourth century, proclaims it to be the lofty standard of god Vishṇu, erected by a mighty king named Chandra, who is surmised to be Chandragupta II of Gupta dynasty. With only traces of corrosion on the portion covered under the ground, this pillar, manufactured sixteen hundred years ago, is an eloquent tribute to the metallurgists of those days.

In the last year of the twelfth century Qutbu'd-Dīn laid the foundation of the Qutb-Minār (pl.LXXI), which was finally completed by his son-in-law and eventual successor, Iltutmish (1210-35). It was raised possibly both as a tower of victory and as a *minār* attached to the mosque. Originally the *minār* had four storeys, the uppermost of which was damaged by lightning in 1378 but was rebuilt by Fīrūz Shāh Tughluq (1351-88) in two storeys. With its projecting balconies carved with stalactite decoration on the underside, inscriptional surface-carvings and variegated flutings this 72·5 m. high *minār* with three hundred and seventy-nine steps, is the highest stone tower in India.

Iltutmish enlarged the Quwwatu'l-Islām mosque by extending the great screen on either side and by raising an enclosure of colonnades outside the original courtyard. The arches of his screen are still *trabecate*, although their arabesque ornamentation is Saracenic, as distinct from the mixed decoration of Qutbu'd-Dīn Aibak's screen. His tomb, square

MONUMENTS OF THE DELHI SULTANS

on plan, but with its dome no longer in existence, stands to the north-west of the Quwwatu'l-Islām mosque. It is plain on the outside, but profusely carved with inscriptions and geometrical designs on the inside, recalling the Hindu ideal in its richness.

Another early mosque, built from the dismantled remains of Hindu temples, is at Ajmer. It is known as Arhāi-Din-kā-Jhonprā, ('hut for two-and-a-half days'), possibly from the fact that a fair used to be held there for two-and-a-half days. It was commenced by Qutbu'd-Dīn about 1200 and was laid on the same plan as the Quwwatu'l-Islām mosque, with carved pillars used in colonnades. Its prayer-chamber, the carved ceiling of which rests on pillars raised in three tiers, is faced by a thick screen carved with effective decoration and pierced by corbelled but engrailed arches, which appear here for the first time (pl. LXXII).

The first example of a monumental Muslim tomb in India, called Sultan Ghārī's tomb, however, lies about four miles west of the Qutb. It was built in 1231 by Iltutmish over the remains of his eldest son and heir-apparent, prince Nāsiru'd-Dīn Maḥmūd. Laid out within a walled enclosure with bastions on corners, which impart it the look of a fortress, its octagonal grave-chamber lies underground, as the level around it was raised by a rubble-packing. The ceiling rests on columns raised with two pillars each robbed from an earlier Hindu shrine; carved lintels from another were found embedded in the thick lime-concrete roof. Other pieces were used in the ceilings of the prayer-chamber and bastions and the pillars re-utilised in the verandahs, originally used as a *madrasa*, after chipping the decoration off them. The tomb was repaired later by Firūz Shāh Tughluq.

ISLAMIC MONUMENTS

Nāsiru'd-Dīn, the last Sultan in Qutbu'd-Dīn's line, left the affairs of state to Ulugh Khān Balban, originally one of Iltutmish's slaves and now father-in-law and minister of Nāsiru'd-Dīn. In the absence of an heir, Balban succeeded Nāsiru'd-Dīn in 1266. Balban's tomb, lying not far from the Qutb, is built with rubble stone, and consists of a square chamber with arched openings on all the four sides. It is now without a dome and in a dilapidated condition, but occupies an important position in the development of Indo-Islamic architecture, as we find here for the first time the use of a true arch.

B. THE KHALJĪ DYNASTY (1290-1321)

Firūz Shāh, an Afghanized Turk of Khaljī tribe at the Delhi court, captured the throne from Shamsu'd-Dīn Kaimurth, one of Balban's successors, in 1290 and assumed the title of Jalālu'd-Dīn Khaljī. Among the six rulers of Khaljī dynasty, the third in the line, 'Alāu'd-Dīn, ascended the throne in 1296 and is well known, not only for his political exploits, but also for his architectural ambitions and achievements. This was just the time when the empire of the Saljuqs in western Asia was breaking up under the incessant inroads of the Mongols, and poets, artists, architects and craftsmen under their employ were taking shelter in neighbouring lands. Some of them, no doubt, resorted to the Delhi court, and brought with them Saljuqian architectural traditions which resulted in such characteristics in Khaljī buildings as the 'spear-head' fringe on the underside of the arch, ornamental bosses in relief in spandrels and alternating courses of narrow 'headers' and wide 'stretchers' on the masonry-face. The initial phase of experimentation and improvisation in

MONUMENTS OF THE DELHI SULTANS

Islamic architecture was now over, and it developed its own methods and idioms. Employment of the true arch, mostly in the form of a pointed horseshoe, broad dome, recessed arches under the squinch, perforated windows, arabesque low reliefs, inscrip-tional bands and use of red sandstone relieved by marble are some of the other features which charac-terize Khaljī architecture.

‘Alāu’-d-Dīn extended the Quwwatu’l-Islām mosque in Delhi by enlarging its enclosure of colonnades. He built two gateways on the long eastern side and one each on the north and south, among which only the last one, called the ‘Alā’i-Darwāza, has survived in entirety. Here the ‘spear-head’ fringe on the underside of a horseshoe-shaped arch appeared for the first time and the monotone of red sandstone was relieved by inscribed marble bands. ‘Alāu’-d-Dīn also commenced building another *minār* within the north-ern half of the extended Quwwatu’l-Islām mosque, but he had hardly raised the tower to its first storey, when death overtook him. He had doubled the size of the mosque, and his *minār* was also intended to be twice the size of the Qutb-Minār. His tomb lies to the south-west of the mosque, along with the remains of a *madrasa* or college.

In 1303 ‘Alāu’-d-Dīn laid the foundations of Sirī, which was the second city of Delhi, but the first to be originally built by the Muslims. It is now repre-sented only by stretches of its thick stone walls provided with flame-shaped battlements, which appeared here for the first time.

During ‘Alāu’-d-Dīn’s reign his son Khizr Khān is said to have built the Jamā‘at-Khāna-Masjid, which lies close to the tomb of Hazrat Nizāmu’-d-Dīn Auliya. Its red sandstone facing, low dome, ‘spear-head’ fringe of arches, recessed squinch arches,

ISLAMIC MONUMENTS

frames of Quranic inscriptions and arrangement of alternating wide and narrow courses are features which are common with the 'Alā'i-Darwāza.

C. THE TUGHLUQ DYNASTY (1321-1414)

The last of the Khaljis, 'Alāu'd-Dīn's third son, Qutbu'd-Dīn Mubārak Shāh, was killed by Khusraw Khān, a low caste Hindu convert in Sultan's favour, later appointed by him as his chief minister. Ghāzī Malik, a Turk noble of the Tughluq tribe, who was then governor of Debalpur in Panjab and whose loyalty to his Khalji overlords was unbounded, marched against Khusraw Khān and beheaded him. There being no male survivor from the house of the Khaljis, he was proclaimed king in 1321 under the title of Ghiyāthu'-Dīn Tughluq.

Among the eleven rulers of the Tughluq dynasty, who reigned in succession, only the first three were interested in architecture and added a new capital-city each in Delhi. Under the Khaljis Islamic architecture had begun to acquire a standard grace and ornament and a preference for an appropriate use of red colour to relieve the grey, drab surfaces. But with the puritanical Tughluqs the order changed. Their buildings are distinguished by plain and austere surfaces of grey stone, cross-vaults over large halls, battered walls and bastions, the latter particularly on the quoins, four-centred arches and lintels above openings. The battered construction, a necessity in thick walls of mud or bricks (but not in stone), may have been borrowed by the Tughluqs from Sind, Panjab or even Afghanistan, where mud or brick was in use.

The element of reduced ornament in the Tughluq buildings shows them to an advantage. Inscribed

MONUMENTS OF THE DELHI SULTANS

borders and medallions in spandrels, often executed on plaster or stucco, obtain an extremely effective result. The drab look of the plain mass was further relieved by encaustic tiles, which appear to have been introduced now for the first time.

The Tughluqs were also interested in impounding rain-water for irrigation by erecting bunds and embankments, and some of these have survived to this day. Ghiyāthu'd-Din Tughluq (1321-25) built the fortified town of Tughluqābād, the third city of Delhi. With its battered walls of grey rubble perched on desolate hills, where its position gives it a natural advantage, Tughluqābād was raised as a stronghold rather than as an architectural enterprise. It is in two parts, the citadel and palaces along the southern walls forming one unit and the city to the north the other. On plan it is an irregular rectangle with over 6 km. of fortification. The citadel is still intact, and the walls of palaces can also be discerned. The city-portion is, however, in extreme ruins, although one may make out the alignment of some of its streets.

Across the main entrance of Tughluqābād on the south is Ghiyāthu'd-Din's tomb. Faced with red sandstone relieved by marble, and with batter on exterior, it is enclosed within high walls forming an irregular pentagon. With a 'spear-head' fringe on the underside of its arched openings on three sides and its colour-scheme, it still retains some of the characteristics of Khaljī architecture. But its arch, with an ogee curve at the apex recalling the 'Tudor' arch, a slightly-pointed 'Tartar' dome and the use of beam-and-arch for openings are new features. Originally it stood within an artificial reservoir and was connected with Tughluqābād by a causeway, now pierced by the Qutb-Badarpur

ISLAMIC MONUMENTS

road. The sluice-gates of the vast reservoir are to be seen to the north of the main road close to the massive embankment between the northern and southern spurs of the hills.

Ghiyāthu'd-Dīn's successor, Muḥammad Tughluq (1325-51), added the small fortress of 'Ādilābād on the hill south of Tughluqābād, with which it shares the main characteristics of construction. He also raised the fourth city of Delhi, Jahānpanāh, which largely comprised a walled enclosure between Qal'a Rāi Pithora and Sirī in order to afford protection to his subjects living there. Only some stretches of these walls are now extant. A unique monument which formed part of Jahānpanāh is a bridge, called Sātpula, consisting of a weir with seven main and four subsidiary arched openings with a tower at each end.

Muḥammad is well-known in Indian history for his idiosyncratic move in transferring not merely the capital but also the entire population of Delhi to Daulatabad in the Deccan, which had earlier been known as Devagiri. It is a natural citadel (as it lies on a conical hill), the sides of which were cut steeply in earlier times. Muḥammad constructed two ashlar-enclosures of defences here, one within another, with the Devagiri hill on the north-west serving as a citadel and the innermost enclosure.

After Muḥammad came Firūz Shāh (1351-88), who was fond of history, hunting, irrigation and architecture. He founded the towns of Hissar, Fatehabad, Jaunpur and Firuzpur (near Budaun). In and around Delhi, apart from raising new buildings, he also repaired old ones, such as Sultan Ghārī's tomb (above, p. 249), Qutb-Minār (p. 248) and Sūraj-Kund, a reservoir near Delhi, built by Hindu kings. Two inscribed stone columns of Aśoka, one from

MONUMENTS OF THE DELHI SULTANS

Topra near Ambala and the other from Meerut, both undeciphered, were brought by him and erected in Delhi, the former in his new capital and the latter on the ridge near his hunting-palace, popularly known as Pir-Ghaib. Series of low domes over mosques and stone railings around a terrace or open courtyard are some of the new architectural features introduced in his reign.

His new capital, called Fīrūzābād, the fifth city of Delhi, now known as Kotla Fīrūz Shāh, is a large enclosure of high walls, which then lay along the river. With an entrance through a barbicaned main gate on the west, it contained palaces, pillared halls, mosques, a pigeon-tower and a *bāolī* (stepped well) some of which are still in good condition. The main public mosque, Jāmi'-Masjid, has a spacious courtyard, the whole structure resting on a series of cells. It is, however, a pyramidal structure with a diminishing covered area in each successive storey, on the top of which, within a stone-railing, the Aśokan column is planted, that strikes as a unique edifice.

Fīrūz Shāh built several hunting-lodges in and around Delhi, some of which, such as Mālcha-Maḥal, Bhūli-Bhaṭiyārī-kā-Maḥal and Pir-Ghaib, lie on the ridge.

The Hauz-i-'Alā'i, a large reservoir which had been built earlier by 'Alāu'd-Dīn Khaljī to feed his capital Sirī and which is now in ruins, was restored by Fīrūz Shāh, and, on its south-western corner, long halls in two storeys, laid to serve as a *madrassa* or college. This place is now known as Hauz-Khāss and includes the tomb of Fīrūz Shāh, a lofty structure with an impressive dome and a front yard enclosed within stone railings.

During Fīrūz Shāh's reign several mosques were raised in Delhi. Khān-i-Jahān Jūnān Shāh, son of

ISLAMIC MONUMENTS

a father bearing the same title of Khān-i-Jahān, who was a Hindu convert and became prime minister of Firūz Shāh, is credited with having built seven mosques, some of which are Kalān- or Kālī-Masjid within the city near Turkmān Gate, another Masjid of the same name in Nizamuddin, Kālū-sarāi-Masjid, Khirki-Masjid and Begampuri-Masjid. The mosques in the city and Nizamuddin bear an inscription and are definitely built by the son: whether the builder of others is the father or the son is not certain. All these mosques are characterized by eaves or *chhajjas* supported on brackets, series of low domes and sloping *minārs* on corners and at the entrance. The courtyards of the Khirki-Masjid and Kālī-Masjid in Nizamuddin are divided into squares, some of which are roofed and others left uncovered to admit light.

In Nizamuddin also lies the tomb of Khān-i-Jahān Tilangānī, who was perhaps no other than the prime minister of Firūz Shāh himself. The tomb consists of an octagonal chamber covered by a dome and enclosed by a verandah, each side of which is pierced by three arches. This is the first tomb in this style in Delhi, which later became the hallmark of the Sayyid and Lodī architecture.

During the reign of Ghiyāthu'd-Dīn II (1386-89) was built, near the village of Chiragh-Delhi, the tomb of Shaikh Kabīru'd-Dīn Auliya, popularly known as Lāl-Gumbad. Its walls have a batter, and it is faced with red sandstone, thus simulating Ghiyāthu'd-Dīn Tughluq's tomb. But its small size, conical dome and other weak features only indicate that it is an inferior copy of its prototype.

After the death of Firūz Shāh Tughluq in 1388, the Sultanate was politically unstable, and each of his successors could retain the throne only for a

MONUMENTS OF THE DELHI SULTANS

brief period. In 1396, Nusrat Shāh, one of Firūz Shāh's grandsons, usurped the throne from Maḥmūd Tughluq, although the latter managed to return to the throne in 1399 after Nusrat Shāh's murder. Tīmūr invaded India in 1398 and plundered and devastated the town of Delhi. He retreated next year, but the country could not recover, with nobles and provincial governors warring against each other and against the Sultan. With this kind of political instability and the effect of Tīmūr's invasion, the architectural activities in the country came almost to a dead-stop.

D. THE SAYYID DYNASTY (1414-44)

After Maḥmūd's death in 1413, the nobles transferred their allegiance to Daulat Khān Lodī, who, however, was attacked and taken prisoner by Khizr Khān, governor of Panjab, in 1414. Khizr Khān ascended the throne and founded the so-called Sayyid dynasty. Four rulers of this dynasty reigned in succession till 1444, but the country knew no prosperity. There was no patronization of arts or architecture. No cities, palaces or mosques were built, as during the rule of earlier dynasties. Only tombs were raised over the dead.

Yet some of these tombs are architecturally important. There were two designs in them, octagonal and square. The former style had made a beginning during the Tughluq period with the tomb of Khān-i-Jahān Tilangānī (above, p. 256). The latter came to have a distinct elevation, with the façade divided by a string-course and with series of panels of sunk niches above and below it giving it the semblance of two or three 'storeys'. In these tombs, the central portion of each side projects to

ISLAMIC MONUMENTS

form a vertical rectangle, within which the main arch, with a beam-and-bracket entrance and a small open window above it, covers almost the entire height of the wall. The sides of the rectangle and corners of the structure are provided with pinnacles (*guldastas*). One arch on either side of the entrance is open to admit light, but the others, like those on the second 'storey', are false and closed. The height of these square tombs is greater than that of the octagonal ones, although the latter cover a wider area on ground plan.

Unfortunately the persons buried in most of these square tombs remain unidentified, and there exists an impression that they contain the remains of nobles, while the kings were buried in octagonal ones. On the other hand, it seems likely that the square plan became popular in the Lodī period, as the first inscribed tomb of this design, the tomb of Mubārak Khān, popularly known as Kāle-Khān-kā-Gumbad, is dated to 1481 during the Lodī rule.

Khizr Khān's son and successor, Mu'izzu'd-Dīn Mubārak Shāh is said to have founded a city called Mubārakābād along the Yamuna, but no trace of it now remains. He died in 1434, and lies buried in Kotla-Mubarakpur at Delhi. His tomb, octagonal on plan, with a central chamber and verandahs all round, each side pierced by three openings, is typical of this style. Originally it was enclosed within a large octagonal enclosure. Its wide dome rises from a sixteen-sided base, each corner provided with a pinnacle, and the top of the dome being surmounted by a lantern. The centre of each side is occupied on the roof by a pillared octagonal kiosk (*chhatrī*), and each corner is provided with a sloping buttress in the Tughluq style. With its low and wide dome, and with the same contours repeated on the

MONUMENTS OF THE DELHI SULTANS

domes of the *chhatrīs*, the whole structure looks stunted.

The tomb of Muḥammad Shāh (died in 1444) lies in the Lodī gardens. It is also built on an octagonal plan, but here the drum is raised, and so is the height of the *chhatrīs*, with the result that it is a much more impressive structure than Mubārak Shāh's tomb.

E. THE LODĪ DYNASTY (1451-1526)

During the reign of Muḥammad Shāh Sayyid (1434-44), Buhlūl Lodī, the Afghan governor of Sirhind, had extended his influence through Panjab and had become almost independent. 'Alāu'd-Dīn 'Ālam Shāh, Muḥammad Shāh's son and successor, retired to Budaun, leaving the governorship of Delhi to one brother-in-law and the superintendence of the city-police to another. The two, however, fell apart, and in 1451 Buhlūl Lodī captured the throne, although initially he professed to reign on behalf of 'Ālam Shāh.

Buhlūl (1451-89) brought some kind of order on the political scene, but was engaged largely in subduing the provincial kingdom of Jaunpur and other chiefs. His successors, Sikandar and Ibrāhīm, remained likewise engaged. Under such circumstances there existed no impetus for raising new buildings; and all that the Lodīs left are some tombs in the two styles that had come into vogue during the Sayyid period. The simplest octagonal tomb is an open pillared pavilion, and a large number of them are found all over Delhi. But even the elaborate design continued to be followed till the reign of Akbar, although by then the royal tombs had come to have a different design. There are several

tombs of the square variety in Delhi, a large number of them scattered between Hauz-Khāss and Kotla-Mubarakpur, but the identity of the persons buried in them is not known. The Shish-Gumbad in the Lodī gardens at Delhi follows the pattern described earlier (p. 258). It was decorated with glazed tiles, from which it derives its present name, meaning 'dome of glass'.

Buhlūl Lodī's tomb in Chiragh-Delhi is a poor square structure, each side broken by three arched openings and the roof surmounted by five domes. Sikandar (1489-1517) lived at Agra and raised some buildings at the place which acquired from him the name of Sikandara. No remains of these buildings, however, remain. It is, however, his tomb in Delhi which exemplifies the final phase in the evolution of the octagonal tomb. The tomb proper possesses the same features as Muḥammad Shāh's tomb, except that the *chhatrīs* on its sides are now missing. It stands within a large square garden enclosed by high walls, provided with a wall-mosque on the west, octagonal towers on the corners and an ornamental gateway on the south. The mosque and garden enclosure are features which later became characteristic of the Mughal tombs and assign to it a transitional position between the earlier fortified tombs and the spacious garden mausoleums of the Mughals.

Two mosques built in Delhi during the rule of the Lodis deserve mention, as certain features, which developed into important characteristics in the Mughal period, are found introduced here for the first time. The prayer-chamber of the Barā-Gumbad mosque in the Lodī gardens, built in 1484, is divided into five bays and is surmounted by three domes, resting on corbelled pendentives, the end bays being

MONUMENTS OF THE DELHI SULTANS

roofed by low vaults. Its façade is broken by five arches of almost equal height but unusual shape. At the rear, oriel windows project from the ends and the centre; and the external angles and the *mihrāb* bay are strengthened by sloping buttresses. The entrance to the courtyard was through an imposing domed gateway, now known as Barā-Gumbad, which has 'double-storeyed' façades. The mosque is profusely ornamented with foliage and inscriptional decoration and coloured tilework.

The Moṭh-ki-Masjid built by Miyān Bhoya, a minister of Sikandar Lodi, is raised from a platform faced with cells. Built of ashlar grey stone, its prayer-chamber is also faced with five graceful arched openings, the central one being the highest, and each fitted with tiled medallions in the spandrels. The central bay and the end ones are domed. The central dome is supported on squinch niches, and the side ones on corbelled pendentives. Like the Barā-Gumbad, it has sloping buttresses flanking the rear projection, double-storeyed corner-towers at the rear and oriel windows. On the two corners of the eastern compound-wall, there are octagonal domed *chhatrīs* to match with the rear towers. The central *mihrāb* of the prayer-chamber is built with red sandstone and bordered with inscriptions from the Quran, while its ceiling is decorated with plaster-work.

During the later part of his reign Ibrāhīm Lodī (1517-26) became particularly suspicious and capricious, not hesitating even to maltreat or imprison his nobles and provincial governors, with the result that there was always someone among them in rebellion against him. Bābur, the Mughal king of Kabul, had already raided India twice, but now Daulat Khān Lodī, governor of Lahore, who was

ISLAMIC MONUMENTS

much too discontented with the Sultan, sent him an invitation to attack the Lodī ruler. Bābur marched into India in 1523 but had to go back owing to the pressure by Uzbeks on Balkh. In 1525 he returned, and the armies of Ibrāhīm and Bābur met at the famous battle of Panipat. Ibrāhīm was killed and Bābur occupied Agra and Delhi. Ibrāhīm's tomb lies at Panipat. The original tomb itself was perhaps a modest structure. All that one now sees there is a grave on a brick platform, obviously an almost recent construction.

4. MONUMENTS OF THE PROVINCIAL KINGDOMS

The Sultans of Delhi ruled over the different parts of the country through their governors. The ambition of these governors or the weakness of the central authority led them, sooner or later, to throw off the central yoke and to become independent, not only politically, but also, to some extent, culturally. The provinces thus developed regional styles of architecture, which were conditioned by several factors, such as the extent of the influence of the central power, the personal taste or interest of the ruler, contact with foreign traditions, influence of earlier local traditions, presence of suitable craftsmen and availability of particular materials.

In the main, eight provincial styles, including those prevalent in what is now Pakistan, are generally recognized, although other variations, less significant, could also be pointed out. The main characteristics only of these styles and their products are described below under each provincial kingdom.

MONUMENTS OF THE PROVINCIAL KINGDOMS

A. PANJAB (*circa* 1150-1325)¹

In Panjab two towns or erstwhile provincial headquarters came under the control of the Muslims, albeit they arrived there through different routes and in different periods. As a result of the Arab invasion early in the eighth century, a Muslim kingdom was established at Multan, while at a later date both Maḥmūd of Ghazni and Muḥammad of Ghūr secured Lahore as base for their inroads on India. The use of brick, coloured tilework and woodwork characterize the Panjab style. No monuments of this period have survived in Lahore, although it is noticed that some later woodwork in Lahore and other towns of Panjab retains certain features which were derived from Saljuqian ornamentation and characterized the Panjab style.

The position is different at Multan, where five tombs enshrining the remains of saints were built between the middle of the twelfth and the beginning of the fourteenth centuries. Among these the most impressive is the tomb of Shāh Rukn-i-‘Ālam (built in *circa* 1320-25), with its octagonal ground plan, battered walls and tapering minarets and corner turrets (*guldastas*). Its picturesqueness is heightened by the use of coloured tiles, chiselled brickwork and bands of carved timber. It was built at the order of Ghiyāthu’d-Din Tughluq (1321-25), who was devoted to the saint: this explains the use of battered walls, a characteristic of Tughluq architecture. On the other hand, in the matter of octagonal plan, Multan architecture may have influenced the Delhi architecture, as the first octagonal tomb, that of

¹ A brief description of the style in Panjab (Pakistan) has been included, so as to give a comprehensive idea of the provincial styles, and also because it exerted some influence on the Delhi architecture.

ISLAMIC MONUMENTS

Khān-i-Jahān Tilangāni, was erected much later in Delhi during the reign of Firūz Shāh Tughluq (above, p. 256).

B. BENGAL (*circa* 1200-1550)

In or about 1202 the Hindu king Lakshmanasena of Bengal was surprised and overrun at Nadia (Navadvīpa) by Bakhtyār Khaljī's son, Muḥammad Khaljī, who subsequently established a more or less independent administration there, although nominally under the Delhi Sultans. It was, however, during the rule of Muḥammad Tughluq that Bengal became really independent. In 1576, Dā'ūd Shāh, the last Afghan ruler of Bengal, was killed by the generals of Akbar and the province reverted to the central imperial control.

The Islamic monuments of Bengal are not much different from such buildings elsewhere on plan and in design, but the use of a different building-material and the execution of details inspired by local traditions have made them quite distinct. The so-called 'Bengal' roof with sloping cornices, which originated from bamboo-construction, was adopted by the Muslims, and later it spread widely even in other regions. Brick was the chief building material in the alluvial plains of Bengal from early times and remains so even now, the use of stone being limited largely to pillars, which were mainly obtained from the demolished Hindu temples. The pillars in Bengal, even when constructed with brick, are generally short and square, and the openings usually arcuate, for trabeate construction normally called for the use of stone. Stone carving in low relief is seen in some buildings. But it is the traditional carved brick which was pressed into service for decoration.

MONUMENTS OF THE PROVINCIAL KINGDOMS

Only the patterns became geometrical, arabesque or floral, without any weakening in their richness and profusion. Glazed tiles in pleasing colours were also used for decoration.

The Islamic architecture of Bengal may be divided into three phases: (i) from *circa* 1200 to 1340, while the capital was at Lakhnauti (later called Gaur) and the kingdom still nominally under the Delhi Sultans; (ii) from *circa* 1340 to 1425, when the capital was at Pandua; and (iii) from 1425 to 1576 during which the capital was again shifted to Gaur.

Gaur and Pandua are separated by a distance of only 27 km. and lie in the present Malda District of West Bengal; their entire area is covered with the remains of citadels, palaces, gateways, mosques and tombs. Monuments of the first phase are no longer extant at Gaur. Some idea of their character may, however, be gleaned from contemporary remains at and near Tribeni on the Hooghly river, which was apparently occupied by the Muslims in the initial stages of their arrival in Bengal.

Here the mosque of Zafar Khān Ghāzi, an early adventurer, bears an inscription of 1298 but was entirely rebuilt in the sixteenth century. His tomb, however, shows that it was built largely with re-assembled material from a Hindu temple, although pointed arches were incorporated in the design.

An early mosque in the neighbouring village of Pandua (different from the capital in Malda District), now extremely dilapidated, is multi-domed and rectangular on plan. It is built with brick, but the pillars are of stone obtained from a demolished temple. In the neighbourhood is a 36·5-m. high brick tower, built about 1340 in several storeys. Even with its crude proportions, it recalls the Qutb-Minār at Delhi.

ISLAMIC MONUMENTS

There are extensive mounds of ruins at Pandua indicating a long occupation even before it was made capital in or about 1340 by 'Alāu'd-Dīn 'Alī Shāh, perhaps to bring himself within a striking distance of Sonargaon, where his rival Fakhru'd-Dīn Mubārak Shāh held control.

There is, however, only one monument here which illustrates the second phase in the development of the Islamic architecture in Bengal. It is the Ādina-Masjid, in fact, an elaborated version of the mosque at Pandua near Tribeni, just described. Begun in 1364 by Sikandar Shāh (1357-93), it is one of the largest mosques in India, with its outer dimensions measuring 154.5 m. by 87 m. Built on the usual rectangular plan, it has an impressive façade of arches on the interior extending to a depth of five bays on the west and three on the other sides; all its cubicles are surmounted by a total of three hundred and seventy-eight small domes. Stones pilfered from demolished Hindu temples, possibly from as far as Lakhnautī, have been used in its pillars, carved *mihrābs* and as veneer in the lower portion on the exterior and up to the cornice inside the prayer-chamber. In the prayer-chamber the trefoil or multi-foil arches of the *mihrāb* and another adjacent niche, placed within a rectangular frame and carved with stylized geese and other motifs, are remarkably indigenous in feeling. Its arches, with the centre at the impost level and with the span in excess of the radius, lend a peculiar fascination to the aisles. Part of the northern half of the prayer-chamber is divided into two storeys, the upper storey known as the *Bādshāh-kā-Tākht* ('king's throne') being obviously intended for the king and royal ladies. Its spacious nave was roofed by a vault of pointed arch.

MONUMENTS OF THE PROVINCIAL KINGDOMS

The third phase constitutes the real provincial style of Bengal, when the builders ceased to depend on the utilization of material stripped from Hindu temples and brought their structures into harmony with the local traditions and materials. The first great construction of this style is the mausoleum of Jalālu'd-Din Muḥammad Shāh (1414-31), called the Eklākhi tomb, at Pandua, while the other monuments of this phase are mostly concentrated at Gaur.

The Eklākhi tomb consists of an octagonal tomb-chamber, within a large square hall with octagonal corner-towers and curved cornices, the roof being surmounted by a central hemispherical dome. Its façade is divided in the middle by a string-course with panels above and below it giving it the semblance of two 'storeys'. Each side is pierced in the centre and fitted with a stone door-frame, bodily removed from a temple but provided with a pointed arch above the lintel in the Tughluq style. The whole surface of walls and towers is profusely decorated with carved brickwork.

At Gaur the earliest building representing the constructional and ornamental methods of this style, although of an entirely different character, is the Dākhil-Darwāza, built by Bārbak Shāh (1459-74) as a ceremonial gateway in front of the citadel. With a tall arched entrance between vertical pylons on either side and tapering towers on the corners, it is an imposing structure (pl. LXXIV).

The main features of construction in the Eklākhi tomb, however, set the pattern for several mosques at Gaur and elsewhere. These mosques with curved cornices and often decorated with glazed tilework comprise a rectangular prayer-chamber apportioned into several aisles and bays, divided by pillars of brick or stone, the latter mostly removed from

ISLAMIC MONUMENTS

Hindu temples. Arched openings characterized their façade and also sometimes the sides. At the corners stand towers, usually octagonal. There are small domes over each bay or a bigger one in the centre. The façades are divided by one or two string-courses and series of decorative panels. The western wall in the interior bears several niches, the central one being larger and more plentifully decorated. The usual courtyard in front of the prayer-chamber has been dispensed with in several mosques. Such are the Tātipārā (*circa* 1475), Chāmkāṭi or Chāmkān (*circa* 1475), Darasbāri (*circa* 1480), Loṭan (*circa* 1480), Gunmant (*circa* 1484), Chhoṭā-Sonā (*circa* 1510), Baṛā-Sonā (*circa* 1526) and Qadam-Rasūl (1530) mosques at Gaur. The Darasbāri-Masjid is particularly rich in terracotta ornamentation, including the rather unusual 'palm-and-parasite' motif, which is found also in Gujarat, although in a latticed screen (below, p. 277). The small rectangular tomb of Fateḥ Khān (died *circa* 1657) at Qadam-Rasūl is covered by a gabled and curved roof, the structure looking like a thatched hut.

The 26-m. high Firūz-Minār at Gaur, twelve-sided in the lower three storeys and round in the upper two, is decorated with both carved bricks and glazed tiles.

C. JAUNPUR (*circa* 1360-1480)

Malik Sarwar, originally a eunuch in Muḥammad Tughluq's household, held the title of Khwāja-i-Jahān ('Master of the World'), and, after Firūz Tughluq had declared Jaunpur a provincial capital, was appointed the governor of the province with the title of Maliku'sh-Sharq ('King of the East'). In 1394, he became independent and extended his

MONUMENTS OF THE PROVINCIAL KINGDOMS

authority over Oudh, Tirhut and Bihar. He and his successors, known as Sharqī kings, ruled from Jaunpur for nearly a century.

After Malik Sarwar's death, his adopted son Qaranful ascended the throne under the name of Mubārak Shāh (1399-1402). His successor, Ibrāhīm Shāh (1402-36), was a great patron of learning and architecture, and utilized the talents of the poets, artists and craftsmen who had left Delhi after the devastation brought about by Timūr's raid. Jaunpur now came to be known as the 'Shirāz of India'. Finally Husain Shāh, who came to the throne in 1458, was driven from Jaunpur by Buhlūl Lodi and the Sharqī dynasty thus came to an end. Later Sikandar Lodi annexed Jaunpur to the Delhi Sultanate. He spared the mosques, but other buildings at Jaunpur suffered total devastation at his hands.

Jaunpur was a prosperous Hindu town with several temples, which were all pulled down by the Muslims and the material utilized in mosques. Among the pre-Sharqī Muslim buildings at Jaunpur is a fort and a mosque, both now dilapidated. The mosques erected by the Sharqī rulers are built on the conventional plan, but they possess distinct characteristics in which tapering minarets, battered sides of the pro-pylons, stucco decoration, arch-and-beam openings and low four-centred 'Tudor' arches with decorative fringes are features influenced by the Tughluq style. The square pillars in the mosques are comparatively plain, and bracket and capitals only roughly carved. The Sharqī monuments are, however, more ornate than the Tughluq ones. Their carved stone ceilings, latticed screens, panels and arches with their tympana, all bear floral and geometrical designs of somewhat rough but effective workmanship. The one distinct feature of Jaunpur

ISLAMIC MONUMENTS

style, however, is the pro-pylon, a tall screen with battered sides concealing the dome, and raised in front of a gateway or an opening of the prayer-chamber.

The Aṭāla-Masjid was the first building to be erected in Jaunpur style. Its foundations were laid in 1377 by Fīrūz Shāh Tughluq on the site of the Hindu temple, said to be of Aṭalā-devī, but the construction was taken up later by Ibrāhīm Shāh and completed in 1408. It has the usual quadrangular plan, with a square courtyard enclosed by the prayer-chamber on the west and cloisters on the other three sides. The cloisters are in five aisles and double-storeyed, two aisles on the lower storey with a pillared verandah opening on the outside and providing a series of cells for use by pilgrims or merchants. Beams and brackets support the openings in cloisters.

On each side the cloisters are interrupted by a gateway fronted by a pro-pylon. The pro-pylon in front of the nave in the prayer-chamber, 23-m. high and 17 m. wide at the base, is, however, the most graceful and imposing (pl. LXXV). Containing a tall recessed arch, 3.4 m. deep, flanked by two towers, with series of openings in the upper portion, it also provides the entrance to the nave through a central beam-and-bracket opening surmounted by an arch. The verticality of its towers on either side of the tall arch is broken by four main string-courses and sunk arches. Two other similar pro-pylons of smaller size are placed on either side of this main one.

The nave in the prayer-chamber is vertically divided into three portions, so that the sides are first converted into an octagon by means of squinches and then into a sixteen-sided base by brackets, in order to raise the shapely hemispherical dome. At

MONUMENTS OF THE PROVINCIAL KINGDOMS

one end of the transepts, supported on pillars and screened by *jālīs*, is the enclosure reserved for ladies. At the rear, not merely the portion occupied by the main *mihrāb* but also those by the other two *mihrābs* facing the side pro-pylons, project outwards and are flanked by tapering minarets in the Tughluq fashion.

Two other mosques, built about 1430, generally on the same pattern as the Aṭāla-Masjid, are Khālis-Mukhlis-Masjid and Jhānjhri-Masjid. The former is simple and devoid of much ornamentation; the latter, its central pro-pylon alone now surviving, shows that its screen (*jhānjhri*), from which it derives its name, is highly ornamental. Another mosque, the Lāl-Darwāza-Masjid, was built about 1450 by Bibi Rājā and forms part of a palace-complex.

The Jāmi'-Masjid, which is the largest mosque at Jaunpur, was built about 1470 by Husain Shāh (1458-79), the last Sharqī ruler. Its two distinct features, absent in other mosques preceding it, are that, like some of the Tughluq mosques in Delhi, it is built on a raised terrace; and its transepts on either side of the nave are covered by high vaulted roofs, a feature which is not found in any other similar building.

D. GUJARAT (1297-1572)

Gujarat was conquered by 'Alāu'd-Din Khalji in 1297, and he appointed a governor there. Muḥammad II (1390-94), grandson of Firūz Shāh Tughluq, sent Zafar Khān as its governor, but he declared himself independent in 1408 and ascended the throne under the title of Sultan Muzaffar (1408-11). It was, however, during the rule of his grandson and successor Aḥmad Shāh (1411-42) that Gujarat

ISLAMIC MONUMENTS

became independent in reality. Among the Sultans of Gujarat, the long reign of Maḥmūd Begarḥa (1458-1511) is regarded as most prosperous. His grandson Bahādur Shāh (1526-37) came on the throne about the same time when the Mughals captured the Delhi throne. Gujarat, however, remained independent till 1572, when it was annexed by Akbar.

The Gujarat style is the richest and perhaps the most prolific among the provincial styles. A rich local architectural tradition and the vanity and patronage of powerful Gujarat kings, which impelled them to raise buildings in rivalry with other kingdoms, including the Sultanate of Delhi, appear to be responsible for the production of so many important monuments in Gujarat.

The long span through which the Islamic architecture in Gujarat passed can be divided into three periods. In the first period (1297-1411), from the time Gujarat came under the control of 'Alāu'd-Dīn Khaljī till it became really independent, buildings in Gujarat were either converted from Hindu temples or built largely with their dismantled material. The Khaljī conceptions of symmetry and proportions, blended with the local leaning towards spaciousness, elegance and decorative designs, created a new idiom. But among the important monuments raised during this period at Patan, Broach, Cambay, Dholka, Mangrol and Petlad, few have survived. At Patan, where numerous temples were erected during the Solankī rule, a temple was converted in about 1300 into Shaikh Farid's mausoleum. Even in the Ādina or Jāmi'-Masjid here, built by the Khaljī governor Ulugh Khān, now survived only by its foundations, pillars from Hindu temples were re-erected to the plan of a mosque.

MONUMENTS OF THE PROVINCIAL KINGDOMS

In the Jāmi'-Masjid at Broach, built early in the fourteenth century, the open pillared prayer-chamber is divided into three compartments, each compartment containing apparently pillars from a single *mandapa*. Its western wall contains niches provided with pointed arches and carved on the general pattern of the niches in Hindu temples, but with motifs characteristic of Islamic ornamentation.

Unlike the mosque at Broach, the prayer-hall in the Jāmi'-Masjid at Cambay, built in 1325, is not an open pillared hall, but one closed with walls and provided with arched openings, as in the Quwwatu'l-Islām mosque at Delhi (p. 247) or the Arḥāi-Din-kā-Jhonprā at Ajmer (p. 249). The alternating narrow and wide courses in its construction, however, recall a Khalji characteristic noticed at Delhi (p. 250). The pillars inside the central arch bear an engrailed arch, like a *torana* in a temple, a device which became very popular later. The Hilāl Qāzī's mosque at Dholka is smaller but introduces for the first time a graceful minaret on either side of the central arch, a feature which later became characteristic of the Gujarat architecture. The Tānka-Masjid, again at Dholka, built in 1361, has an open pillared prayer-hall, and rich carvings on the pillars and ceilings. The Jāmi'-Masjid at Mangrol possesses three archways and balconied windows.

The second period (1411-58) in the development of Gujarat architecture commenced with the enthronement of Aḥmad Shāh (1411-41), who brought real independence to the province and founded the city of Ahmadabad, close to the old town of Asawal. It was now that a distinct Gujarat style took shape. The uncertainties of the earlier improvisation and experimentation disappeared; the buildings

ISLAMIC MONUMENTS

were thoughtfully planned and executed to result in complete specimens of the style. The device of admitting light through a clerestory in the raised central portion of the roof, graceful minarets, delicate latticed screens, profuse carvings in windows supported on carved brackets and a balanced use of both arcuate and trabeate construction are some of the features characteristic of this phase.

The citadel raised by Aḥmad Shāh on the bank of the Sabarmati river is survived now only by a gateway, called the Bhadra gateway. Aḥmad Shāh's mosque inside the citadel, surmounted by two rows of five domes each and with a façade of five arches, contains at least some pillars reused from Hindu temples and follows the pattern of the Jāmi'-Masjid at Cambay. In Ḥaibat Khān's mosque, surmounted by three domes, the two turrets in front and the five bastions at the rear, all tapering, suggest Tughluq influence. The five-domed mosque of Sayyid 'Ālam, built in 1412, strikes, however, a new note with its prominent minarets, now survived by their bases, heavy projecting cornices, pillared openings on the sides, rich decorative details and the addition of a gallery or triforium on the second storey around the nave. It is, however, in the Jāmi'-Masjid, built in 1423, that these and other characteristic features came into full play and created a monument which is grand in conception and finished in details.

The prayer-hall of this mosque, 64 m. by 29 m., consisting of about three hundred pillars, is divided into fifteen large squares, three along the depth and five along the width, each square being surmounted by a large dome, while smaller domes cover the smaller squares between the larger ones. The skyline of the roof is broken by raising the portion over the three central arches into two storeys in the

MONUMENTS OF THE PROVINCIAL KINGDOMS

first bay, and the portion around the central dome above the nave into three storeys. The single-storeyed height at the northern extremity adjoining the rear wall is divided into two storeys, the upper one consisting of a latticed gallery for the ladies.

Aḥmad Shāh desired to integrate the Jāmi'-Masjid and his citadel into a unified plan. Accordingly he built a three-arched ceremonial gateway, called the Tīn-Darwāza, to the east of the Jāmi'-Masjid on the road from the citadel. To its south lie Aḥmad Shāh's tomb and a latticed enclosure containing the tombs of the queens, called Rāni-kā-Ḥazira.

Muḥammad Shāh (1442-51) built in 1446 the mausoleum and mosque of the famous saint, Shaikh Aḥmad Khaṭṭū, at Sarkhej, 10 km. south-west of Ahmadabad. This grouping of a mosque and mausoleum, called Rauza, became very popular in Gujarat. Later Sarkhej became an important place of retreat; and several mosques, tombs, palaces, gateways and gardens were laid out here around a vast reservoir.

The next ruler, Qutbu'd-Dīn Aḥmad Shāh (1451-58), built a mosque and his tomb. The former, consisting of a pillared rectangular hall faced with a wall containing five arches and surmounted by five domes, is a simple structure, but nonetheless effective with a restrained use of latticed windows and other ornamentation. To his reign also belong two other buildings, constructed with brick and in a style which has little relationship with the architecture of Gujarat. These arose perhaps as a result of commercial contact between southern Persia and the west Indian coast. Of these the mosque of 'Alīf Khān at Dholka was built in 1453 and is now in ruins. Its interior is divided into three squares, each surmounted by a dome, intercommunication being provided through arched openings, and there being

ISLAMIC MONUMENTS

massive rectangular turrets on either side of its arched façade. The tomb of Daryā Khān, built about the same time at Ahmadabad, consists of a square chamber in the centre with an arcade of five bays around it, each bay roofed by a dome, the central one being the largest.

Gujarat architecture reached its zenith in the third and final phase (1458-1572), which began with the rule of Maḥmūd Begarha (1458-1511). In this period a happy and effective fusion was achieved between the local traditions and the methods and principles special to the Islamic architecture. The high standard of architecture now reached was due in no small measure to the personal zeal and interest of Maḥmūd Begarha himself, and in fact, most of the major monuments were erected during his rule. He founded the cities of Mustafābād at Junagadh, Maḥmūdābād, 27 km. from Ahmadabad and Muḥammadābād at Champaner, all of which can be proud of some important Islamic monuments. The number of buildings erected during this period is very large, and only some of them are noticed here.

Notwithstanding the king's interest in his recently founded cities, Ahmadabad continued to be enriched by new buildings. The mosque of Muḥāfiz Khān, who was appointed the magistrate of Ahmadabad when Maḥmūd Begarha took his residence at Mustafābād, was built in 1492. It is small in size and conventional in pattern but contains all those features and details which characterize the larger mosques, and is virtually a gem of architecture. The mosque of Rānī Sīprī built in 1514, is also small, but beautiful in decorative workmanship. Its tall slender turrets, solid and without stairways, placed at either end of its pillared façade, mark a new stage in the development of minarets. The walls of Sīdī Sa'id's mosque,

MONUMENTS OF THE PROVINCIAL KINGDOMS

built in 1572, consist substantially of perforated screens, but it has become world-famous on account of its screens covering the tympana (pl. LXXVII A). These screens, some of them representing the 'palm-and-parasite' motif, which occurs also in the Darasbāri-Masjid in Bengal (p. 268), has the delicate quality of filigree-work.

Certain monuments were also erected in the suburbs of Ahmadabad. At Uthmanpur, on the other side of the river opposite Ahmadabad, was built in about 1460 the Rauza of Sayyid Uthmān, in which the hall of the mosque is roofed by low domes, and at either end of the pillared façade stands a six-storeyed minaret. The mosques of Miyān Khān Chishtī and Bibī Achūt Kūkī, at Hajipur and Multanpur, built in 1465 and 1472 respectively, are divided into three compartments and screened with walls pierced by arches, with a minaret flanking the central archway on both sides. At Rasulabad, popularly known as Shāh-i-‘Ālam on account of his tomb here, 2·5 km. south of Ahmadabad, several buildings came up between 1475 and 1570. So also at Batwa, about 10 km. south of Ahmadabad, where the tomb of Qutb-i-‘Ālam, built about 1480 over an earlier grave, is important. It is a double-storeyed structure consisting of pillars and arches, no trabeation occurring in the entire structure. A similar construction is the tomb of Mubārak Sayyid, built in 1484, near Maḥmūdābād, which was founded by Maḥmūd Begarḥa in 1479. At Sarkhej, Muḥammad Shāh (1442-51) had built a tomb, as mentioned earlier (p. 275). Maḥmūd Begarḥa added there, among other buildings, a double-storeyed columned palace, with projecting bays and pavilions, and his own tomb.

At Champaner, in 1485, he had founded his new capital of Muḥammadābād, consisting of a

ISLAMIC MONUMENTS

citadel and outer city-walls. Among several monuments existing there, two are important. The Jāmi'-Masjid here was built in 1523 on the same pattern as the Jāmi'-Masjid of Ahmadabad. The much smaller Nagina-Masjid follows the plan and details of the larger mosques, but impresses more as an ornamental piece.

The traditional fondness for decoration among the craftsmen of Gujarat resulted in even purely utilitarian constructions being treated with ornamentation. Such are the sluice-openings, as for example, at the Kankaria reservoir at Ahmadabad and at the tank at Sarkhej and *bāolīs* or stepped wells, as Bāi Harir's *bāolī* at Ahmadabad.

E. MALWA (1401-1561)

Malwa was invaded by Iltutmish early in the thirteenth century, but it came under the control of the Delhi Sultanate in about 1310 during 'Alāu'd-Din Khalji's rule (1296-1316). In 1401 Dilāwar Khān Ghūri, a governor, who claimed to be a descendant of Muḥammad Ghūri, proclaimed himself independent. This independent kingdom was annexed by Gujarat in 1531, and later conquered by Humāyūn. When Humāyūn regained his throne after his return from exile, Shujā'at Khān, who had been appointed governor by Sher Shāh Sūri, refused to acknowledge his authority. In 1554 Shujā'at Khān died and his son, Bāz Bahādur, whose romantic tale of love with Rāni Rūpamati is well-known, ascended the throne. He was driven away in 1561 by Adham Khān, Akbar's general, and Malwa thus came under the authority of the Mughals.

The local Hindu architectural traditions did not much influence the Islamic constructions in Malwa;

MONUMENTS OF THE PROVINCIAL KINGDOMS

instead the province depended on Delhi, from where many craftsmen were uprooted in consequence of the devastation wrought by Timūr and had taken employment in different provinces. It is no wonder, therefore, that the Malwa style is essentially arcuate. The pointed arch with 'spear-head' fringe, battered wall and arch-and-lintel door in this style are derived from the Khalji and Tughluq constructions, while the pyramidal dome follows the Lodi contours. The style possesses, however, some features of its own, such as large spaces, high plinths approached by impressive flights of stairs, skilled use of arch-and-beam, carved brackets supporting the windows, perforated screens and the decorative effect achieved by the use of stones of different colours or of encaustic tiles.

This style also passed through three phases, as we find with some other styles, although its third phase is of a different nature. In the earliest phase use was made of pillars obtained from demolished Hindu temples, but they were tied to each other by arches on the principles of Islamic construction.

Dhar, capital of Malwa under the Paramāra kings, retained that position under the Muslim governors and kings till 1405, when Hūshang Shāh (1405-35) transferred the capital to Mandu. There are two mosques at Dhar which illustrate the first phase in the Malwa style. The mosque of Kamāl Maulā (*circa* 1400), also known as Bhojaśālā, consists of a courtyard with pillared corridors on three sides and a prayer-chamber along the western wall. The pillars are taken from what was the Bhojaśālā or king Bhoja's hall, which was apparently not merely a temple but also a college, since some of the inscribed slabs found from the ruins bear literary texts of Bhoja. The Lāt-Masjid, built in 1405 by Dilāwar

ISLAMIC MONUMENTS

Khān, is similar and contains fragments of an iron pillar (Hindi *lāṭ*), from which it derives its name.

Mandu lies 35 km. south-east of Dhar on the spur of a Vindhyan hill, some 610 m. above the sea, surrounded by a gorge. It was, therefore, ideally situated from considerations of security, which led Hūshang Shāh to shift the capital here. Within the natural fortress, enclosed by battlemented walls running over a circumference of 40 km., were raised several mosques, tombs, palaces, tanks and pavilions, depending on the contours of the terrain. Two of the mosques here belong to the first phase and are built from the remains of Hindu temples. These are Dilāwar Khān's mosque, built in about 1405, and Malik Mughith's mosque, built in 1452. In these mosques the spaces between pillars are spanned by arches, even though they are ornamental rather than functional.

Among the entrances to the fort, two are well-known, the Delhi Gate on the north and the Tārāpur Gate on the south-west. The other monuments lie in several clusters, three of them important. In the first cluster are the Jāmi'-Masjid, Ashrafī-Maḥal and Hūshang Shāh's tomb; in the second, Hindolā-Maḥal and Jahāz-Maḥal, and in the third, Bāz Bahādur's palace and Rānī Rūpamatī's pavilion.

The Jāmi'-Masjid was begun by Hūshang Shāh but completed in about 1440 by Maḥmūd I (1436-69) of Khaljī extraction, who had killed Hūshang Shāh's son and enthroned himself. The square courtyard of the mosque has an open façade of eleven arches on each side, with a depth of three aisles on the north and south, two on the east and five in the prayer-chamber. It is built on a raised plinth approached by a long flight of steps on the east. The square gateway, projecting from the enclosure

MONUMENTS OF THE PROVINCIAL KINGDOMS

and with its interior decorated with enamelled tiles, is surmounted by a large dome, while there are three similar domes over the prayer-hall and a smaller one on each square bay in the aisles.

The tomb of Hūshang Shāh, built of marble, is contiguous with the western wall of the Jāmi'-Masjid, and, like it, was commenced by Hūshang Shāh himself and completed in about 1440 by Maḥmūd I. Entered through a domed porch, the square tomb lies in the centre of a quadrangle and is roofed by a large dome, with smaller cupolas at the corners.

Opposite the Jāmi'-Masjid on the eastern side of the main north-south road is the Ashrafī-Maḥal, which was built by Maḥmūd I, perhaps early during his reign. Originally it consisted of a large square courtyard enclosed by a series of cells on the outside fronted by two arched arcades. The central portion of the western side projected further with series of cells on its three sides and a porch in front, approached by a long flight of steps. The courtyard was later filled, and on it was raised what has been surmised to be the tomb of Maḥmūd I but exists now only in ruins. The corners of the quadrangle of the Ashrafī-Maḥal were provided with towers, the one at the north-western corner being the largest and highest, and now survived only by its lower portion. It is believed to be identical with the *Haft-Manzil* of the contemporary historians and was raised to signify Maḥmūd's victory over Rāṇā Kumbha of Chittor, who had himself raised his famous tower of victory at Chittor in commemoration of his earlier victory over Maḥmūd I (p. 172).

Almost immediately inside the Delhi Gate there is a large group of buildings, two of which deserve mention. The Jahāz-Maḥal (pl. LXXVI), an oblong structure divided into three halls, with an ornamental

ISLAMIC MONUMENTS

cistern in the northern courtyard, was built by Maḥmūd I as a royal palace. It lies between two tanks, which brimmed over with their waters during the monsoons, and appear to have given it its name, meaning the 'ship-palace'. With a long flight of steps in front leading to its spacious terrace, provided with domed pavilions, and other pavilions projecting at the rear on the bank of the tank, it must have looked grand in its heyday. Jahāngīr relates that Nūrhān, his queen, was extremely fond of this palace, and when they stayed here they were both entertained often to long-lasting festivities.

The Hindolā-Maḥal, possibly raised during the reign of Ghiyāthu'd-Dīn (1469-1500), is T-shaped, with the vertical stem of the letter consisting of a long hall with an opening at the end and tall arches on the sides, their piers buttressed with slopes. The illusion that these buttresses create has given it its name meaning the 'swinging-palace'. The horizontal stem of the letter was added later and is in the shape of a double-storeyed structure, with a cross-shaped hall on the ground floor.

The final phase of the Malwa buildings does not represent any advance in architecture. These buildings, consisting of palaces, pavilions, *ḥammāms*, etc., were raised for pleasure, which was the royal fashion of the day. The palace of Bāz Bahādur, approached by a flight of steps, with its courtyards, halls, octagonal pavilions and *bārādarīs* on the terrace, and Rānī Rūpamati's pavilions consisting of a double-storeyed structure with sloping walls and containing a long hall with rooms at the two ends, to which domed pavilions on the terrace were added later, belong to this phase. Rānī Rūpamati is said to have used these pavilions daily for having a glimpse

MONUMENTS OF THE PROVINCIAL KINGDOMS

of the sacred Narmada from here. Among other monuments representative of this phase are the Nilakaṇṭha palace, Lāl-Maḥal and Chishtī Khān's palace.

Chanderi was a province of the kingdom of Malwa, and several buildings in the Malwa style were raised there. Kushk-Maḥal, originally seven-storeyed, but now surviving in four storeys, was built here in about 1445 by Maḥmūd I. The Jāmi'-Masjid is built on the same plan as the one at Mandu, but contains convoluted brackets supporting the eaves in Gujarat fashion. The Shāhzādi-kā-Rauza has plain but bold squinch-arches, with lotus medallions in its tympana and spandrels. The 15-m. high Bādal-Maḥal gateway, with tapering turrets spanned by a screen of two arches, one above the other, is original but lacks boldness or grace.

F. THE DECCAN (1325-1687)

The whims of Muḥammad Tughluq (1325-51) caused virtually an unbroken series of rebellions in the different provinces of the Delhi Sultanate. In the Deccan, which had been invaded by 'Alāu'd-Dīn Khaljī and brought under the authority of the Delhi Sultans, Hasan, a general on whom Muḥammad had bestowed the title of Zafar Khān, declared himself independent in 1347 at Daulatabad. He enthroned himself under the full title of Abu'l-Muzaffar-'Alāu'd-Dīn Bahman Shāh (1347-58) and founded thus the Bahmanī dynasty.

He established his capital at Gulbarga, but one of his successors, Aḥmad Shāh (1422-35), shifted it to Bidar in 1425. After the reign of Maḥmūd Shāh (1482-1518), the provinces of the Bahmanī kingdom broke away one after another, and five independent

ISLAMIC MONUMENTS

kingdoms came into being with capitals at Bidar, Berar, Ahmadnagar, Bijapur and Golkonda. They retained their independent status till almost the end of the seventeenth century, when ultimately they were annexed by Aurangzeb.

Bahman Shāh himself was perhaps of Persian extraction. Besides, the Bahmanī rulers, who were incessantly at war with the Hindu kingdoms of the south and even attempted to exterminate the Hindu population or to convert it to Islam, encouraged Persians, Turks, Arabs and Mughals to marry Hindu women and settle in their territory. This was also the time when adventurers, literary men, artists and craftsmen from west Asian countries were freely coming either to the imperial court at Delhi or to the powerful provincial court of the Deccan. These conditions naturally affected the Deccan style of architecture, which owed little to the local Hindu traditions, at least in its early stages. The two major streams which fed it were the imperial one from Delhi and the Persian one from abroad. The latter took stronger roots gradually, so that some of the monuments are so avowedly Persian in character that they appear to have little connexion with the main course of the Indo-Islamic architecture.

The earliest Islamic buildings in the Deccan that appeared during the rule of the provincial governors were converted, as might be expected, from Hindu temples. Such, for instance, are the two mosques at Daulatabad and Bodhan, near Hyderabad, the latter consisting merely of some alterations and additions to a Jaina temple. The real Deccan style, which came into existence from the time when the province became independent in 1347, may be divided into three phases: (i) 1347-1425, when Gulbarga was the capital, (ii) 1425-1518, when

MONUMENTS OF THE PROVINCIAL KINGDOMS

Bidar served as the capital, and (iii) 1518-1687, when the original kingdom broke up into five independent kingdoms.

A series of forts were the first monuments to be erected by the Bahmanis. Among them the fort at Gulbarga, perched on a hill and consisting of double walls, battlemented with heavy stones, with an encircling moat cut into the rock, is impressive and representative of this class. It is, however, the Jāmi'-Masjid at Gulbarga, built in 1367, which exhibits features of the Decean style and is, at the same time unique. Entered through a gate on the north, it has corridors on its three sides and a prayer-hall on the west, which is surmounted in the centre by a tall dome resting on a raised clerestory. Its unique characteristic is its pillared but roofed courtyard, a feature which finds no parallel, except that the courtyards of two mosques built in Delhi during the reign of Fīrūz Shāh Tughluq (above, p. 259) are partially covered. The arches of its cloisters, with low piers and a wide span, invest its arcades with a sombre but arresting look (pl. LXXVII B). The mosque was built under the direction of a Persian architect, which accounts for some of its features.

Among the other monuments at Gulbarga are seven royal tombs, divided into two groups. The three earlier tombs, massive structures, square on plan, with their battered walls, flat, wide domes supported on squinches, battlemented parapets and fluted corner-turrets have all the characteristics of Tughluq architecture. The tomb of 'Alāu'd-Dīn Bahman Shāh, the founder of the dynasty is, small but is decorated with tiles of deep blue colour. The dome of the tomb of Muḥammad Shāh II (1378-97) rises from a raised base, as in the Jāmi'-Masjid.

ISLAMIC MONUMENTS

The other group consisting of four tombs is called the Haft-Gumbad ('Seven Domes'), as three of its tombs have two domes each and make up a total of seven domes. The earliest in this group, that of Mujāhid (1375-78), is larger than the tombs of the previous group but is built in the Tughluq style like them. The remaining three tombs, share the same Tughluq features, but consist of two adjacent chambers, one for the grave of the king and the other for those of his family. Among these the tomb of Tāju'd-Dīn Firūz (1397-1422), with its fluted domes, is the largest. A semblance of two 'storeys' is effected both on its exterior and the interior, through panels of recessed arches in two rows.

In 1425, Aḥmad Shāh Walī (1422-36), who remained ill at Gulbarga and considered it even unlucky, transferred the capital to Bidar, 96 km. north-east. The Bahmanī court now included several officers of Persian lineage, with the result that the customs, art and architecture in the Deccan came under the Persian influence. The fort of Bidar is larger than that of Gulbarga and is generally on the same pattern, but the remains of several palaces inside it, such as Rangīn-Maḥal ('Painted Palace') Takht-Maḥal ('Throne-room'), Dīwān-i-Ām ('Hall of Public Audience') and Zanāna-Maḥal ('Palace for Ladies'), with gardens, waterways and *ḥammāms* are evidence of a royal life patterned on the courts of west Asian countries. These palaces were tastefully decorated with coloured tiles or mural paintings.

The Jāmi'-Masjid and the Sola-Khamba, the latter too a mosque, followed the plan and structural features of the mosque at Gulbarga, without however, their courtyards being roofed. Khwāja Maḥmūd Gāwān, a scholarly Persian nobleman, who had been appointed as minister by Humāyūn, nicknamed

MONUMENTS OF THE PROVINCIAL KINGDOMS

Zālim or 'Cruel' (1457-61), but continued also during the reigns of his two successors, built in 1422 a *madrasa* or college, now largely in ruins. It is one of those buildings which are almost entirely Persian in details and consists of a large rectangular courtyard giving access to halls and rooms on the sides, with an entrance on the east flanked at the corners by four-storeyed *minārs*. From the middle of the other three sides project semi-octagonal towers roofed by tall bulbous domes. In the walls of this building sheets of lead were used to serve the purpose of the modern damp-proof course. Glazed tiles with floral, arabesque or inscriptional designs were used so thickly on its surface that the construction was subordinated to decoration. Within this spacious building appear to have been accommodated a mosque, lecture-halls, living quarters and the famous library of Maḥmūd Gāwān.

It is, however, the twelve royal tombs at Bidar, which help us to view the development of the Deccan architecture as a growing movement. They are similar to the tombs of the Haft-Gumbad group at Gulbarga, but there exists no double-chambered tomb here. Their domes are, however, stilted, with an inward return of the curve, putting them in the category of the so-called 'Tartar' dome. They all bear beautiful encaustic tiles, particularly the tomb of 'Alāu'd-Dīn Aḥmad Bahmanī (1436-58).

During this period but before the construction of the *madrasa* of Maḥmūd Gāwān, a 30-m. high, four-storeyed *minār*, called the Chānd-Minār was built at Daulatabad in 1435.

After Maḥmūd Shāh (1482-1518), the Bahmanī kingdom broke up to be succeeded by independent kingdoms, five in number, in different parts. Qāsim Barīd, a Turkī minister, was virtually the ruler from

ISLAMIC MONUMENTS

1487 during Maḥmūd Shāh's reign. He was succeeded by his son, Amīr Barīd. After Maḥmūd Shāh's death, other Bahmanīs were allowed by Amīr Barīd to rule in name, till 1527, when he declared himself independent, and thus the regular rule of the Barīd Shāhī dynasty started at Bidar. The four other kingdoms were Berar, ruled by the 'Imād Shāhīs, Ahmadnagar, ruled by the Nizām Shāhīs, Bijapur, ruled by the 'Ādil Shāhīs, and Golkonda, ruled by the Qutb Shāhīs.

The rulers of these dynasties raised numerous buildings within their realms, which represent the third and the final phase of the Deccan style. The 'Imād Shāhīs of Berar and the Nizām Shāhīs of Ahmadnagar are not known for any remarkable architectural achievement, although the former founded the town and fort of Ahmadnagar where several monuments were erected. The Barīd Shāhīs continued the traditions of Bidar and built several tombs, among which the tomb of 'Alī Barīd (1542-79), the third of the dynasty, is not merely different from others, being open on all sides through its archways, but also the finest. It is, however, the dynasties ruling at Bijapur and Golkonda which were the cultural inheritors of the Bahmanī dynasty and developed their own distinct styles of architecture.

The province of Bijapur became almost independent in 1490 under Yūsuf 'Ādil Shāh (1490-1510), a slave purchased by Maḥmūd Gāwān. He was perhaps of Turkish origin, as suggested by the symbol of crescent on the finials of the domes of the larger monuments at Bijapur. Among the nine rulers of 'Ādil Shāhī dynasty, four were particularly interested in architecture. These are the founder Yūsuf himself, 'Alī Shāh I (1558-80), Ibrāhīm 'Ādil Shāh II (1580-1626) and Muḥammad Shāh (1626-56).

MONUMENTS OF THE PROVINCIAL KINGDOMS

In Bijapur architecture the dome takes a bulbous form, with its drum concealed behind a row of petals and the arch loses its ogée character and becomes pointed and four-centred with low piers. Slender minarets or finials, *chhajjas*, voluted brackets, medallions in the spandrels and foliated finials above the arch distinguish its decorative devices. Surface-ornamentation is executed both in stone and stucco with such motifs as rosette, hanging lamp, arabesque patterns and interlacing inscriptions.

The city of Bijapur contains a citadel and fortress, but its architecture is dominated by a large number of mosques, tombs and *maḥals* (palaces). The Jāmi'-Masjid, built during the reign of 'Alī 'Ādil Shāh I (1558-80) was the first among the important monuments to be erected at Bijapur, although it remained incomplete and a gateway was provided to it by Aurangzeb. Its bare exterior is broken by two arcades, the lower one of recessed arches and the upper one of arched windows from its corridors. The large central hemispherical dome over its prayer-chamber, with petals around its drum, is crowned by a crescent and is enclosed by a square fenestration with finials at the corners. Its *mihrāb* was embellished later with a rich design in brilliant colours.

The Gagan-Maḥal ('sky-palace'), now even without its roof, is a double-storeyed rectangular hall, which was perhaps built about 1560 during the reign of 'Alī 'Ādil Shāh I. It is a civic building, the upper storey of which was apparently used for private apartments and the lower one as the king's audience-hall. What makes it worthy of notice is its façade, which is pierced by an arch with a span of over 18 m., another narrow arch flanking it on either side.

The Ibrāhīm-Rauza, built by Ibrāhīm 'Ādil Shāh II (1580-1627), consists of his tomb and mosque

ISLAMIC MONUMENTS

within a square compound, both rising face to face from a common raised terrace, with a tank and fountain between them. The mosque has a rectangular prayer-chamber, with a façade of five arches, shaded by the *chhajja* and a slender minaret at each corner. Enclosed within a square fenestration rises the bulbous dome with a row of tall petals at its base. The square tomb with double aisles around it, the inner one pillared, has similar features but is finer in proportions. Two narrow arches, next to the ones at each end, break up its facade. On the interior, each wall has three arches, all panelled and embellished with floral, arabesque or inscriptional traceries. The tomb-chamber has a low curved ceiling made of joggled masonry, with empty space between it and the dome.

The Mihtar-Maḥal, which, in fact, is not a *maḥal* or palace, but the gateway of a mosque, is believed to have been built in about 1620, also during the reign of Ibrāhīm 'Ādil Shāh II. With slender minarets at its two corners, the façade of this two-storeyed structure is most remarkable. It is comparatively plain on the ground storey, but on the second storey its beautiful balcony with three arches in front and one each at its sides, supported on exquisitely carved brackets, and with long brackets tied to the narrow piers of the arches to support the *chhajja*, constitutes its main attraction.

By far the *magnum opus* of Bijapur architecture is the mausoleum of Muḥammad 'Ādil Shāh (1627-57), popularly known as Gol-Gumbad or 'Round Dome' (pl. LXXVIII), which is only a part of a larger complex, the other buildings in the scheme being a mosque, gateway called *Naqqār-Khāna* ('Drum-house') and a *dharma-śālā* or rest-house, all confined within an enclosure. The Gol-Gumbad is the largest

MONUMENTS OF THE PROVINCIAL KINGDOMS

domed cubicle in the world, covering a total interior surface of over 1600 sq. m. Architecturally it is a simple construction, its underground vaults consisting of a square grave-chamber enclosed within two aisles, and a large single square chamber over-ground. The large hemispherical dome surmounting it and the seven-storeyed octagonal towers on its corners, lend it its unique appearance. Each of its walls on the outside is divided into three recessed arches, the central one panelled, with a running bracket-supported *chhajja* at the cornice. A 3.4-m. wide gallery rests on its interior at the level of the drum. It is known as the Whispering Gallery, from the fact that even a whisper here reverberates through an echo under the dome. While the smaller domes on its corner-towers are of bulbous variety, the large dome is hemispherical but is covered with a row of petals at the base. The 3-m. thick brick core of the dome is a corbelled construction bound by a tenacious mortar, with iron clamps keeping the veneer stones in position.

Warangal, which was earlier ruled by the Hindu kings of Kākatīya dynasty, was one of the provinces of Bahmani kingdom. Qulī Qutb Shāh, a Turkī officer, who was appointed its governor by Maḥmūd Gāwān, withdrew himself after the latter's execution, but continued to recognize the Bahmanī suzerainty in name till 1518, when he declared himself independent and shortly thereafter transferred the capital to Golkonda. Later, in 1589, the capital was transferred to Bhagnagar, which was eventually named Hyderabad.

The Qutb Shāhī or Golkonda style has much in common with the Bijapur one, such as thin minarets with balconies, windows resting on brackets, lofty pointed arches and bulbous domes with elongated

ISLAMIC MONUMENTS

necks, their base concealed behind a row of petals. Likewise its ornamentation is characterized by ornamental façades, with plasterwork and glazed tiles. The net effect is, however, somewhat different, on account of a florid look lent by a large number of turrets and cupolas and excessive ornamentation, some of which betrays Hindu influence in motifs.

The fort at Golkonda follows the same pattern as the ones at Gulbarga and Bidar, but the buildings inside it are now largely in ruins. The royal tombs, however, still survive and are, in fact, representative of the style. They are generally similar to the ones at Bidar. Square or octagonal on plan, some of these tombs are double-storeyed, the tomb-chamber having a low ceiling separating it from the ceiling of the dome. The tomb of Muḥammad Qulī Qutb Shāh (1580-1612) is built on a double terrace and has three overhanging galleries; that of ‘Abdu’llāh Qutb Shāh (1626-72) is large and double-storeyed containing several finials.

The Qutb Shāhīs built several mosques at Hyderabad. The Jāmi‘-Masjid, built in 1577, is entered through a lintelled opening and has a double prayer-hall with its arches supported on heavy piers. The Toli-Masjid (1671) has also a double prayer-hall, slender minarets and several cupolas, but is distinguished more by its rich surface decoration. The most remarkable of the monuments in Hyderabad, however, is the famous Chār-Minār (‘Four Minārs’). It is a gateway, with a central square structure, open on each side through a lofty arch. There are four three-storeyed *minārs* on the corners, and a double screen of arched openings on the roof. The arcaded galleries, recessed and open arches flanking the openings and the bulbous cupolas provide the decoration which links it with the Golkonda architecture.

MONUMENTS OF THE PROVINCIAL KINGDOMS

G. KHANDESH (1388-1601)

Malik Aḥmad, governor of the Tapti valley, who had been fighting against the Bahmanīs in local wars, declared himself independent and founded the small principality of Khandesh in 1388, after the death of Firūz Shāh Tughluq. He was known both as Malik Raja and Raja Aḥmad, although his successors preferred the title of *Khān*, from which the kingdom derived its name of Khandesh or 'the country of the *Khāns*'. The dynasty, however, is known as Fārūqī from the title of the second Caliph, from whom Malik Aḥmad claimed descent. Khandesh came for some time under the control of the kingdom of Gujarat, but was finally annexed by Akbar in 1601.

The Fārūqī kings ruled originally from Thalner and later from Burhanpur. Sandwiched as Khandesh is between the Deccan on the one hand and Gujarat and Malwa on the other, its architecture was influenced by the styles prevalent in the neighbouring provinces, both in the matter of construction and ornamentation. These combined influences derived from more than one quarter invested the architecture of Khandesh with a character of its own to entitle it to a separate, if not entirely an independent, entity and treatment.

At Thalner there are several tombs, designed more or less on Hūshang Shāh's tomb at Mandu. The inscribed tomb of Mīrān Mubārak (1441-57), also known as Mubārak Khān, which may be regarded as representative of the style, has general resemblance to Hūshang Shāh's tomb, but there is a wider spacing between doors and windows. Its parapets above the *chhajjas* are emphasized, and its stilted dome rises from an octagonal base. The cupolas

ISLAMIC MONUMENTS

on the corners of the central raised portion are absent in some of the tombs. There exists also an octagonal tomb with ornamental fringe under its arch and profuse sculptured ornamentation on its façades.

The city of Burhanpur was founded in 1400, when the fort, called Bādshāhī Qal‘a, was built on the Tapti. The Jāmi‘-Masjid at Burhanpur, built in 1588 by ‘Ādil Shāh IV (1577-97), also known as Raja ‘Alī Khān, is conventional in pattern, but the façade of its prayer-hall with fifteen arches is flanked by a tall *minār* on either side in the Gujarat fashion. The Bibi-kī-Masjid, perhaps built earlier, has more originality and vitality. The façade of its prayer-hall is screened, except for the arches; and the central archway is flanked by three-storeyed *minārs*, which are square on plan but become first octagonal, then sixteensided, and lastly circular. Its striking feature is, however, provided by the oriel windows in its top storey. It is richly decorated with carvings and mouldings in the Gujarat style, although their workmanship is much poorer.

The tomb of Shāh Nawāz Khān, son of ‘Abdu’r-Rahīm Khān-i-Khānān, who held the post of governor, was built in the seventeenth century. It combines features borrowed from several styles: the double-storey from Gujarat, the pinnacles from the Tughluqs and the dome from the Lodīs.

H. KASHMIR (1346-1589)

Early in the fourteenth century Shāh Mirzā, an adventurer from Swāt, entered the service of Simhadeva, the Hindu king of Kashmir, who was killed and succeeded by a Tibetan. At the latter’s death Udyanadeva became king, with Shāh Mirzā

still continuing as the minister. After Udyanadeva's death in 1346, Shāh Mīrzā married the widowed queen and usurped the throne. His successors ruled till 1561 except for a short interval. Among them Sikandar (1393-1416) was a religious bigot and earned the title of *Butshikan* ('Idol-breaker'), while another successor, Sultān Zainu'l-Ābidīn (1420-67) is known for his liberality towards the Hindus. Mīrzā Ḥaidar, a relative of Humāyūn, captured Kashmir and ruled it as a Mughal governor from 1540 to 1551, after which Kashmir became independent once again, till in 1589, it was finally annexed to the Mughal empire by Akbar.

Stone had been used in Kashmir by the Buddhists and Hindus in their shrines, but wood was most certainly the chief material employed in their civic buildings. These, however, have not survived owing to the perishable nature of the material. Initially the Muslims raised their buildings in brick on the stone foundations of demolished temples or constructed them with timber, but later stone was rehabilitated by the Mughals.

Judging from later buildings the woodwork was constructed with logs laid crosswise, so that on a corner a log appeared as a 'header' on one wall and as a 'stretcher' on the other. In bridges, the piers which rested on rock or masonry were widened gradually in upper courses on the principles of corbelling. Where necessary, wooden pieces were joined with wooden pins or dovetailed into each other. Courses of brick or stone were usually secured between transverse or horizontal wooden members. The wooden construction on the whole, however, remained simple, without mechanical devices or expedients.

Mosques or tombs constitute the two typical buildings in Kashmir architecture, the latter known

ISLAMIC MONUMENTS

locally as *Ziārat*. Sultan Zainu'l-‘Ābidīn raised his mother’s tomb in brick in Srinagar on the stone foundations of a temple, square on plan but with offsets at the corners. The walls were, however, provided with recessed pointed arches, and the hall roofed with domes. Encaustic tiles were set on the walls for decoration.

The Rauza of Madanī is another monument which was built in 1444 on the foundations of a temple. In fact, even the Hindu carved pillars are used here both in the mosque and the tomb. The chief attraction of this monument, however, is its Mughal tilework of blue, red and yellow colours, which includes the curious representation of a half-human and half-animal being.

The tombs of timber, square on plan, have a cubical chamber surmounted by a pyramidal roof, over which rests an angular pinnacle or spire. The mosques are either square buildings like the tombs or four such squares are placed one each in the centre of the columned sides of an enclosure.

The mosque of Shāh Hamadān on the bank of the river Jhelum is built on the foundations of a temple, but its double-storeyed superstructure with projecting covered balconies is in wood. On the ground floor there is a rectangular hall, the remaining portion of the square being utilized for small chambers on the north and south. Birchbark in several layers is nailed on its roof, which is turfed and planted with flowers, the whole creating a very picturesque effect when the flowers are in bloom. The upper storey of the structure is plain but the pillars, capitals, prayer-niche and wall panels of the lower storey are carved, and the ceiling painted.

The Jāmi‘-Masjid at Srinagar was commenced in about 1394 by Sikandar, but completed by Zainu'l-

MONUMENTS OF THE PROVINCIAL KINGDOMS

‘Ābidīn. It was burnt and rebuilt several times, the last main restoration having been carried out by Aurangzeb (1658-1707), perhaps without interfering much with its original plan and design. It is built with brick, with a substantial use of wood, and consists of a square courtyard surrounded by arched cloisters. In the middle of each side is a square structure like that of a tomb, serving as the nave on the western side and as a gateway on the others, the principal entrance being on the south.

Later the Mughals made use of stone in Kashmir and beautified it with gardens (below, p. 322).

5. MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

A vast kingdom in India came under the rule of the Mughals when Bābur defeated and killed Ibrāhīm Lodī, as earlier described (p. 262). The monuments raised during the long rule of the Mughals and during an interregnum when the Sūrs occupied the throne (1538-55), form an important chapter in the narrative of the Islamic architecture in India. The storey is taken up from the few mosques and tombs constructed during the Lodī rule, when art and architecture, in fact, all cultural activity, were showing signs of a stalemate. The Mughals infused fresh blood into the movement and carried it to its pinnacles, which was due largely to their personal interest and patronage, but also to the comparatively peaceful times and general prosperity under them. When, however, the personal interest of the rulers waned, as happened during the rule of the later Mughals, there was an abrupt decline in aesthetic appreciation and architectural enterprise. The following description of the monuments erected

ISLAMIC MONUMENTS

during the reigns of different rulers will illustrate the rise and fall of the Mughal architecture.

A. BĀBUR (1526-30)

Bābur was a man of culture and exceptional aesthetic taste. He was particularly fond of formal gardens, and at least two gardens are ascribed to him, one at Agra, and the other at Panipat in Karnal District, around the Kābulī-Bāgh-Masjid built by him. In his *Memoirs* he mentions having built a mosque at Agra within the Lodī fort. The Jāmi'-Masjid at Sambhal, in Moradabad District, was also built by him. Otherwise no other monuments built directly under his patronage are known to exist in India. He was not much impressed by the Indian workmen; yet in his *Memoirs* he gives the number of stone-cutters and artisans engaged on his buildings, from which it appears that some of the monuments raised by him have not survived.

There exists, however, at Palam, near Delhi, a small brick-built mosque, with three-arched openings on its façade and a dome on the central bay, with small minarets at the four corners. It was built in 1528-29 during Bābur's rule according to an inscription. The much more ambitious and refined mosque of Jamālī-Kamālī in the Mehrauli area of Delhi was commenced about the same time but completed during Humāyūn's reign (below, p. 304).

B. THE SŪR DYNASTY (1538-55)

After Bābur's death at Agra in 1530, his son, Humāyūn, succeeded him. But he passed through very troubled times as Sher Shāh, whose grandfather Ibrāhīm Khān, an Afghan from Sūr, had entered the

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

service of Buhlūl Lodī, and who had himself served under Bābur, was now up in arms against Humāyūn and, in 1538, drove him from India, obliging him to take shelter in Iran. Sher Shāh met his end in 1545, but the Sūr dynasty founded by him continued to rule till 1555, when Humāyūn returned, overthrew Sikandar Shāh Sūr and regained his throne.

Sher Shāh was not only a man of exceptional courage and a great administrator, but also devoted to learning and intellectual pursuits. He improved the communications by constructing several roads, with *sarāis* at regular intervals, among which a trunk road from the Indus to Sonargaon in Bengal, passing through Lahore, Delhi and Agra and following an alignment that it bequeathed to the present Grand Trunk Road, is best known. Several forts were also built by him, but as architectural productions his tombs and mosques play a more important rôle in the story of the Indo-Islamic architecture.

Among the *parganas* assigned by Sikandar Lodī to Hasan Khān, father of Sher Shāh, was Sasaram in Bihar, and it was here that the latter passed his years of adolescence and later raised some of the tombs, which represent the initial phase of his architectural undertaking. Sher Shāh elaborated the Lodī octagonal pattern in the construction of the tombs, and, in fact, perfected that pattern. The members of his family lie buried in three of the several tombs at Sasaram, while the master-builder, 'Alāwal Khān, is himself buried in another one. The tomb of Sher Shāh's father, Hasan Khān, built in about 1535, is, like the Sayyid and Lodī tombs at Delhi, octagonal in plan with a verandah around it, each side pierced by three arches, and the whole surmounted by a large and wide dome. It has, however, no batter, and its verandahs are roofed by three low

ISLAMIC MONUMENTS

domes on each side. The general look and the composition of the structure, however, is impaired, as it rises straight from the ground and the absence of kiosks on the roof of its first storey emphasizes the bareness of its walls on the second storey.

Sher Shāh's own tomb (pl. LXXIII B), built about 1540, is free from these imperfections. Situated within a large tank, 425 m. square, it is 46 m. high and much larger than his father's tomb. It rises from a platform in two terraces, with pillared domes on the upper terrace and matching pillared kiosks on the corners of the roofs of the two storeys above. Screened windows admit light into the interior from the second storey. The eight sides of the ground floor have been multiplied into thirty-two to prepare a suitable base for the dome. Access to the tomb is provided by a causeway from the northern bank, where a dignified domed structure serves as the gate and was perhaps used also as a guardroom. The tomb was originally decorated with coloured tiles, traces only of which now remain.

Sher Shāh also built the tomb of his grandfather, Ibrāhīm Khān, at Narnaul in Mahendragarh District (pl. LXXIII A), where the latter had held an assignment. This tomb follows the design of the square Sayyid and Lodī tombs in Delhi but has certain new features. Its walls simulate a 'double-storeyed' construction, both on the exterior and the interior, with panelled recessed niches, both above and below a string-course. Unlike the Delhi examples, its dome is wide and low, the corners occupied by pillared kiosks and slender decorative turrets (*guldastas*). Originally parts of the structure were faced with enamelled tiles. The use of red and dark grey stones, latticed screens, elegant merlons, ornamental fringes under its arches, a series of lovely turrets,

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

Quranic inscriptions around its western niches in the interior, medallions in the spandrels of arches, a scheme of horizontal and vertical panelling and a painted ceiling of excellent brushwork—all combine to give it a very rich and effective decorative appearance.

After his enthronement Sher Shāh concentrated his building activities at Delhi, which may be described as the second phase of the Sūr architecture. To begin with, he appears to have razed to the ground the city of Dīnpanāh built by Humāyūn, and on the same site, which was also perhaps the site of Indraprastha, believed to be the capital of the Pāṇdavas, he raised the citadel of Purāna-Qal'a with an extensive city-area sprawling around it. Among the so-called seven cities of Delhi, the Purānā-Qal'a is the sixth. It seems that the Purānā-Qal'a was still incomplete at Sher Shāh's death in 1545, and was perhaps completed by Humāyūn, although it is not exactly certain which parts were built by the latter.

On plan the Purānā-Qal'a is irregularly oblong with a circuit of 2 km., with its longer sides on the east and west. Its high walls of rubble masonry with a slight batter, 4 m. thick and as much as 21 m. high in places, have a battlemented parapet above the row of arrow-slits, behind which all along the circumference are built a series of chambers in a two-aisle depth. There are massive bastions on the four corners, in addition to five bastions in the western wall, and three gates, all double-storeyed, one on each side except on the east. The gates have a veneer of red and buff sandstones, with an ornamental use of white and black marble and coloured tiles. The city of Sher Shāh around his citadel was extensive, two points on its circumference being perhaps provided by the large and impressive gates

ISLAMIC MONUMENTS

to the west of Purāna-Qal'a and Koṭlā Firūz Shāh on the Delhi-Mathura road, both known as the Kābulī-or Lāl-Darwāza.

The Qal'a-i-Kuhna-Masjid, built by Sher Shāh Sūr inside the Purānā-Qal'a, which served as the Chapel Royal, marks a step forward from the Moṭh-kī-Masjid (above, p. 261). It is, on one hand, anticipatory of the mosque-design as it was to take shape in the early Mughal period, and, on the other, emphasizes the ornate phase of Sher Shāh's architecture, as distinct from the plain treatment noticed in the tombs raised by him. Its rectangular prayer-hall at the western end of a courtyard with a shallow tank in the middle, which was originally provided with a fountain, is entered through five openings with pointed arches inclining towards the four-centred form. The central arch, fringed with lotus-cusps, is framed within decorative bands containing inscriptions and geometrical designs, with thin turrets on the corners. The entrance arch on a recessed plane is likewise treated, with an arched window supported on brackets between the larger arch and the entrance. The flanking arches are also ornamented, but not to the same extent as the central one. Below the merloned parapet runs a *chhajja* supported on brackets.

The inner west wall of the hall is also divided into five arched recesses, which are richly decorated with white and black marble set in geometrical patterns and framed within inscribed bands. The design of the *mihrāb* is unique, obtained by the sinking of one recess within another, which multiplies the scope for ornamentation. On the northern and southern sides, above the side-entrances are oriel windows, which admit light into the narrow gallery on the second storey running all round the mosque. At the

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

two rear corners are semi-octagonal three-storeyed towers, with openings on the sides.

To the south of the above mosque is Sher-Mandal, a double-storeyed octagonal tower of red stone relieved by marble, with a recessed rectangular entrance within an arch on each side, the same scheme repeating itself in the second storey. Perhaps originally constructed as a pleasure-tower, it is believed to have been used by Humāyūn as his library, from the stairs of which he fell down and died.

The successors of Sher Shāh had no particular interest in architecture. The fortress of Salimgarh adjoining the Lāl-Qal'a in Delhi is believed to have been built by Sher Shāh's son, Islām Shāh (1545-54), also known as Salīm Shāh. During his reign in 1547-48 was also built in Delhi, close to where Humāyūn's tomb was built later, the tomb of 'Īsā Khān, a nobleman at Sher Shāh's court, who also served Islām Shāh after Sher Shāh's death. It is an octagonal tomb with verandahs on all sides, and with buttressed corners and *chhajjas* at the cornice. It is sited within an octagonal compound, in place of a square garden lay-out as in the tomb of Sikandar Shāh Lodi (above p. 261), with a mosque on the western side. Islām Shāh's tomb lies at Sasaram. It was planned as a large edifice but was never completed.

C. HUMĀYŪN (1530-38 AND 1555-56)

Humāyūn ascended the throne in 1530, but was pushed out of the country in 1538 by Sher Shāh Sūr (above, p. 299). During this reign of eight years, he was continuously engaged in warfare with the provincial governors, in addition to the pressure exerted by Sher Shāh. In these circumstances, he had no

ISLAMIC MONUMENTS

leisure, nor any enthusiasm, for intellectual or cultural pursuits, including architecture. He returned to throne in July 1555, after defeating Sikandar Shāh Sūr but died in January, 1556, which gave him no time even for the consolidation of his empire, much less for other activities. His addiction to drugs also must have sapped him off his verve and industry conducive to such activities.

Yet his reign is not entirely barren. In 1533 he laid the foundations of Dinpanāh, a new city, on the bank of the Yamuna in Delhi, and it was completed, with its walls, bastions and gates, within the short period of ten months. But no trace of it now remains, as it was pulled down systematically by Sher Shāh Sūr. After regaining his throne, Humāyūn completed the Purānā-Qal'a.

During his reign, was, however, completed at Mehrauli, near Delhi, the Jamāli-Kamālī-Masjid, which had been commenced in about 1528-29 during his father's reign (above, p. 298). Jamālī was the *nom de plume* of Shaikh Fazlu'llāh, a poet, whose tomb, profusely ornamented with glazed tiles and cut plaster lies next to the mosque. The prayer-chamber of the mosque is entered through five arched openings each of an approximately equal size and rather wide in span, the central one lying in a recessed arch and enclosed within bands and carvings of marble. Its central bay alone is surmounted by a high dome. The five recessed niches of its western wall, oriel-windows at the back, octagonal towers at the rear corners and a staircase leading to a narrow gallery on the second storey are some of the features which it shares with the mosque of Sher Shāh. In fact, the Jamālī-Kamālī-Masjid has an important place in the evolution of the Mughal mosque, for it combines in itself features both of Moṭh-ki-Masjid and

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

Barā-Gumbad-Masjid (above. p 260), which had been built in the Lodi times, and of Sher Shāh's mosque built later.

Humāyūn died in 1556, and his widow Hamīda Bānū Begam, also known as Hāji Begam, commenced his tomb in 1569, fourteen years after his death. It is the first distinct example of proper Mughal style, which was inspired by Persian architecture. There need be no doubt that Humāyūn picked up the principles of Persian architecture during his exile, and he himself is likely to have planned the tomb, although there is no record to that effect. Mirak Mīrzā Ghiyāth, a Persian, was the architect employed by Hāji Begam for this tomb.

The tomb proper stands in the centre of a square garden, divided into four main parterres by causeways (*chārbāgh*), in the centre of which ran shallow water-channels. The square red sandstone double-storeyed structure of the mausoleum with chamfered corners rises from a 7-m. high square terrace, raised over a series of cells, which are accessible through arches on each side. The grave proper in the centre of this cell-complex is reached by a passage on the south. The octagonal central chamber contains the cenotaph, and the diagonal sides lead to corner-chambers which house the graves of other members of the royal family. Externally each side of the tomb, its elevations decorated by marble borders and panels, is dominated by three arched alcoves, the central one being the highest. Over the roof pillared kiosks are disposed around the high emphatic double dome in the centre.

The mausoleum is a synthesis of Persian architecture and Indian traditions—the former exemplified by the arched alcoves, corridors and the high double dome, and the latter by the kiosks, which

ISLAMIC MONUMENTS

give it a pyramidal outline from distance. Although Sikandar Lodī's tomb was the first garden-tomb to be built in India, it is Humāyūn's tomb which set up a new vogue, the crowning achievement of which is the Tāj at Agra. There is also a somewhat common human impetus behind these two edifices—one erected by a devoted wife for her husband and the other by an equally or more devoted husband for his wife.

There exists a fine tomb in the Lodī style, larger than the examples in Delhi, at Tijara, in District Alwar. It is believed to be the tomb of 'Alāu'd-Dīn 'Ālam Khān or 'Ālam Shāh, brother of Sikandar Lodī, who was governor of Tijara for some time. He lived into Humāyūn's reign, but when actually he died is not known. His massive and impressive tomb may have been built about the middle of the sixteenth century.

D. AKBAR (1556-1605)

At the death of Humāyūn, his elder son, Akbar, was only thirteen, and during his early years of rule, his tutor Bairam Khān acted as the regent. Akbar resisted verbal tuitioning and remained almost illiterate, but acquired a spirit of universal toleration and liberal outlook. Later in life he participated in theological debates between various sects of Islam and listened even to the teachings of other religions. In fact, he tried to promulgate a faith of his own, the Dīn-i-Ilāhī ('Divine Faith'). His relations with the Hindus were most cordial, and he married the Hindu princess of Amber, as also other Rajput princesses, and permitted them to lead their Hindu life at home. Among his trusted Hindu courtiers were Raja Mān Singh of Amber and Raja

Ṭc̣dar Mal. He was keenly interested in art and architecture. The Mughal style of painting developed under his guidance, as a result of the fusion of Hindu and Persian techniques. His architecture is characterized equally by a happy blending of the indigenous and Islamic modes of construction and ornamentation. With the exception of Humāyūn's tomb (above, p. 306), in which he does not appear to have taken any personal interest, no distinct Mughal style had taken form yet. Akbar, however, gave it a character of its own for the first time.

Akbar's seat of government was Agra and not Delhi. He demolished the brick fort of the Lodis and gave a new life to the city by raising on the bank of the Yamuna his famous fort, begun in 1565 and completed in 1574. This was the first time when dressed stone was used not only in the palaces but also in the ramparts. With its high walls of a neat sandstone facing, a moat fed by the river, high gateways flanked by bastions, several halls, deliberately arranged palaces along the water-front, mosques, *bāzārs*, baths, gardens and sufficient accommodation for the courtiers, the fort at Agra set a new pattern in the construction of royal citadels that was to serve as a model for later ones. Akbar's buildings were constructed with red sandstone. Unfortunately several of these were remodelled or replaced by Shāhjahān, who preferred marble to sandstone in buildings of personal use. Among the buildings constructed by Akbar in the fort, the Akbari-Maḥal and the two Minā-Bāzārs deserve notice.

All these buildings are of red sandstone, with trabeate construction and restrained ornamentation. Now in ruins, the Akbari-Maḥal consists of a series of chambers opening into a spacious courtyard. The Jahāngiri-Maḥal (pl. LXXIX), reputed to have been

built by Akbar for his son Jahāngir but likely to have been built by Jahāngir himself, consists of a central courtyard, surrounded by double-storeyed halls and chambers. The jambs, brackets, corbels and lintels of its doorways, with a *chhajja* above them, are profusely sculptured. The different rooms in this palace are believed to have been used for different purposes by the Hindu wives of Akbar and Jahāngir. While in the long Minā-Bāzār, which was originally accessible from the Delhi Gate, a regular market was held, in the smaller Minā-Bāzār, near the Minā-Masjid, the wives and daughters of the courtiers dressed as tradesmen held a market on the occasion of *Naurūz* ('New Year's Day') as a pastime for the king and his wives, who bargained with them and finally closed the deals by giving them rich presents.

After Akbar had the misfortune of losing his children in their infancy, he was foretold by the saint Shaikh Salim Chishti, residing at Fatehpur-Sikri, 35 km. west of Agra, that he would have three sons who would survive. Later he sent his pregnant Rajput wife to reside near the saint, and there three sons were born to her. Akbar, much beholden to the saint, regarded the place as lucky and decided to found a new city there. This city of Fatehpur-Sikri was begun in 1569 and completed in 1574, in the same year in which his Fort at Agra was completed. The city of Fatehpur-Sikri lies on a rocky outcrop, and its sandstone ramparts with bastions and gates enclose an irregularly rectangular area, which is open on the north-west, overlooking a vast reservoir and contains a vast range of halls, palaces, offices, gardens, pleasure-resorts, baths, mosques and tombs. Its lay-out is determined by the rocky topography and consequently lacks a systematic pattern. Almost all the

MONUMENTS OF THE SUR AND MUGHAL DYNASTIES

buildings here were raised by Akbar himself and are characterized largely by trabeate construction. The more important among them are described here.

The Diwān-i-‘Ām, or ‘Hall of Public Audience’, consists of a large quadrangle enclosed by cloisters, with the emperor’s throne on the west, with a screened chamber for the use of the royal ladies. It is, however, the Diwān-i-Khāss, or ‘Hall of Private Audience’, which is of a unique design. It is a square chamber, with an opening on each side and a richly-carved column in the centre supporting a magnificent flower-shaped capital. From the circular top of the capital, four passages lead to the corners, and a passage runs right round the walls. It is believed that the central space was occupied by the emperor’s throne, while his ministers sat at the corners or on the peripheral passage.

The socalled Turkish Sultana’s house, whose fair occupant is unknown, consists of a small chamber surrounded by a verandah. It is beautifully carved both on the outside and inside; particularly remarkable is its wide dado carved with panels portraying jungle-scenes with animals, birds and trees. It is the most ornamented building in Fatehpur-Sikri, described as a ‘gigantic jewel-casket’ by Fergusson.

The Khwābgāh or ‘Sleeping-chamber’, a square apartment with a verandah covered by stones chiselled in imitation of tiles, was painted with panels and couplets composed by Salmān Sāwjī in praise of the room and its occupants.

The Panch-Maḥal is a five storeyed pavilion, with each surmounting storey becoming smaller, so that the fifth storey consists only of a single kiosk. The tower was perhaps used for recreation by the emperor and the royal ladies.

Maryam-ki-Koṭhī ('Maryam's house'), also called Sunahrā-Makān, or 'Golden House', consists of a long room with three small rooms at its right angles on the ground floor, with the three rooms repeated on the first floor, and a verandah on three sides. One of the pillars in the verandah is carved with the figures of Rāma and Hanumān—Hindu gods, and the walls are covered with paintings and verses of Akbar's court-poet Faizī. The house is believed to have been occupied by the princess of Amber, who bore three sons to Akbar, including the heir-apparent, and who had the title of Maryamu'z-Zamānī ('Mary of the Age').

Jodh Bāi's palace, the largest domestic building at Fatehpur-Sikri, consists of a courtyard with suites of rooms on its four sides, the construction being double-storeyed in the middle of each side and at the corners. The entrance, through a forecourt, was from the east, while the western block served as a private chapel, with niches to house the images of Hindu deities.

The so-called Birbal's house, or his daughter's house, which does not appear to have been built for or even occupied by either Raja Birbal, a favourite Hindu courtier and a minister, or his daughter, is another attractive building. Double-storeyed, with four rooms on the ground floor and two at the corners on the first floor, roofed by domes, it is richly ornamented with carved designs.

Close to a *sarāi* and on the bank of the reservoir stands a 18-m. high *minār*, octagonal at the base, but circular and tapering above, which is studded with stones in imitation of tusks. It is called Hiran-Minār ('Dear-tower'). Tradition avers it as the burial-place of Akbar's favourite elephant called Harūn, but it is more likely to have been the tower

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

used for shooting the deer and other animals which came to the reservoir for quenching their thirst.

By far the grandest building at Fatehpur-Sikri is the Jāmi'-Masjid, which heralds the later planning of Shāhjahān's Jāmi'-Masjid at Delhi (below, p. 321). It consists of a large quadrangle enclosed by cloisters and a prayer-hall faced with series of alternating wider and narrower arches and a row of pillared kiosks on the roof, with large domes behind them. The original entrance to the court-yard, is on the east through the Bādshāhī-Darwāza. Later, after Akbar's victory over the Deccan, was added the high gateway on the south, called Baland-Darwāza (pl. LXXX). Approached by a long flight of steps and with a semi-octagonal projection containing a high arched alcove, through which three doors give access to the courtyard, it is perhaps the most imposing gate in India.

After the death, in 1571, of Shaikh Salim Chishtī, his tomb was raised in the north-western corner of the compound of the mosque. Comprising a square chamber surrounded by a verandah screened with latticed panels of exquisite design, it is entirely of marble and an elegant structure.

During the early years of Akbar's reign certain buildings were also constructed in Delhi, and he may have been interested even personally in some of them. Adham Khān, son of Māhem Anga, wet nurse of Akbar, and one of Akbar's generals, killed Ataga Khān, a minister and the husband of Ji Ji Anga, another wet nurse. This enraged Akbar who had Adham Khān thrown down from a terrace. Adham Khān's tomb at Mehrauli, built in 1562, is octagonal and is in the Lodī style, with the difference that it lacks the usual *chhajja*. Māhem Anga herself built in 1561-62 the Khairu'l-Manāzil mosque in

ISLAMIC MONUMENTS

front of the Purānā-Qal'a. With its prayer-hall entered through five arches, three domes, double-storeyed cloisters which served as a *madrassa*, stucco and glazed tile decoration, and an imposing gateway, it is an impressive structure.

Ataga Khān's tomb, built in 1566-67 in Nizamuddin, is a square chamber within a walled enclosure. Constructed of red sandstone, inlaid with marble and other coloured stones, and originally effectively ornamented with coloured tiles on the interior, with three recessed arches on the sides, it is an architectural gem.

Outside Delhi and Agra, Akbar built citadels or forts at Ajmer and Allahabad and on the Hari-Parbat at Srinagar, the last re-introducing the use of stone in Kashmir. A mosque was also added by him close to Khwāja Mu'īnu'd-Dīn Chishtī's tomb at Ajmer. At Jaunpur, a fine bridge over the Gomati, with a pavilion over each pier, was built between 1564 and 1568. To his reign also belongs the tomb of Muḥammad Ghauth, a saint and teacher, which was built at Gwalior about 1564 and combines the construction in the Lodī style with ornamentation of Gujarat tradition, as noticed particularly in its perforated screens.

E. JAHĀNGĪR (1605-27)

After Akbar's death in 1605, his son Salim by the Amber princess, ascended the throne at Agra under the name of Jahāngir. By nature he was pleasure-loving and fond of natural beauty and was well-versed in Persian literature and even given to composing verses at times. Miniature-painting attracted him most, and, in fact, the development of Mughal painting owes in no small measure to his direct

patronage. He had, however, little interest in architecture.

He spent the greater part of his life at Lahore and Kabul, and this may account for his interest in developing communications, by making roads and erecting *kos-minārs* ('mile'-stones), bridges and *sarāis*. Bārapula, a long bridge over a *nālā* in Delhi, belongs to his reign. A *sarāi*, called Nūr-Maḥal, in Jullundur district, along the old Grand Trunk Road, contains an impressive gateway.

The construction of his own tomb by Akbar at Sikandara near Agra had been going on for three years when death overtook him. Jahāngir did not like its design and changed it. He completed the tomb in 1613, in the seventh year of his reign. The tomb lies in the centre of a large garden enclosed by battlemented walls, and divided into squares and provided with channels and fountains in the fashion of Mughal gardens. An imposing gateway, built with sandstone but profusely decorated with inlay of marble and other coloured stones rises from the middle of each side, actual entrance being had only from the gateway on the west, others being closed. The main entrance is provided with tall *minārs* on the corners, a feature to be seen for the first time in Mughal monuments.

The tomb proper rises from a raised terrace of red stone with façades of series of arches, broken by a marble gateway, one of which leads to the grave proper. Above the terrace the building is in four storeys, the lower three consisting of pillared arcades, on the top of which the tomb is enclosed within marble cloisters closed on the outside by latticed screens. On the tomb is inscribed the formula of the faith promulgated by Akbar and the ninety-nine attributes of God. With its solid wide

base, but with open arcades and truncated top, the tomb lacks coherence. Outside the enclosure of the tomb the now-derelict Kānch-Maḥal, a double-storeyed building, was also built by Jahāngir; it shows evidence of an effective decoration achieved by the combined use of enamelled tiles and coloured inlay of stones.

The Muthamman-Burj, a double-storeyed pavilion in the Agra Fort, with beautiful inlay, is also ascribed to Jahāngir. But the most important building of his reign is the tomb of Ī'timādu'd-Daula, begun in 1622 and completed in 1628 by his queen, Nūr-jahān, to inter the bodily remains of her father, Mīrzā Ghiyāth Baig, who rose to become the high chamberlain and prime minister to Jahāngir. Lying within a small garden-enclosure, with an entrance of sandstone, it is a square building with a grave-chamber surrounded by verandahs. On the upper storey a pavilion with rectangular dome and screens on the sides enclosed the false graves of Ī'timādu'd-Daula and his wife. The entire structure is in marble and is richly decorated with delicate inlay and paintings containing the characteristic Persian motifs, such as cypress trees, vases, fruits, vines and wine-cups. The tomb occupies an important place in the development of garden-tombs and reveals a phase of transition between the two great epochs of Mughal architecture, that of Akbar and Shāhjahān. Akbar's sandstone has here given place to marble, but his subdued proportions and restrained ornamentation still linger on, while the central flattish dome raised on a rectangular base savours of Rajput architecture. The minarets on the four corners, although short, and the fine latticework, traceries and inlay herald the techniques employed so effectively by Shāhjahān in the Tāj-Maḥal (below, p. 318).

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

In Delhi certain monuments were raised towards the later part of Jahāngir's reign. The Chaunsath-Khamba ('Sixtyfour Pillars') in Nizamuddin, with its sixty-four pillars, was built as his tomb by Mirzā 'Aziz Kokaltāsh, son of Ji Ji Anga and Ataga Khān, in 1623-24, during his lifetime. Bairam Khān's son, Mirzā 'Abdu'r-Rahīm Khān-i-Khānān, who served both Akbar and Jahāngir and was a scholar knowing several languages writing couplets in Hindi under the familiar name of Rahīm, lies buried in a massive tomb close to Nizamuddin. Originally faced with red sandstone, relieved by the use of buff sandstone and marble, its design is similar to that of Humāyūn's tomb, its interior decorated with incised and painted plaster. The tomb is now bereft of its facing, as these stones were stripped off later to build Safdar-Jang's tomb (below, p. 324).

At Srinagar in Kashmir, Nūrbahān built the Patthar-Masjid, while Jahāngir engaged himself in arranging the gardens. Jahāngir also added to the fort at Lahore. He died in 1627 on his way back from Kashmir, and his tomb at Shahdara near Lahore was built later by his devoted queen.

F. SHĀHJAHĀN (1628-58)

Jahāngir died in 1627, but Shāhjahān ascended the throne only in 1628, after Dāwar Bakhsh, son of Khusraw, Shāhjahān's elder brother, had ruled for a while and other rivals had been put out of the way. Shāhjahān inherited the artistic taste of his father, but his interest went beyond. It was architecture which gripped and gratified him and remained his life-long passion.

By the time Shāhjahān came to the throne, the Mughal empire had at its back almost a continuity

ISLAMIC MONUMENTS

of just over a century, during which the artistic traditions had become mature and refined. To these were added Shāhjahān's personal interest and patronage, and the result was a remarkable efflorescence of architecture.

Shāhjahān preferred marble to other stones. His buildings are characterized by a form and feeling of femininity, sensuousness and delicateness, as distinct from the sturdy, robust and relatively plain appearance of the constructions of Akbar. Ornamentation, therefore, naturally plays a dominant rôle in his buildings. The chaste and simple relief-work on the red sandstone now gave way to delicate carvings in marble, almost like filigree, and to fine inlay and painting. The arch became foliated, and the dome received a Persian form, bulbous in outline and constricted at the neck. The pillars are raised with shafts resting on foliated bases and crowned by involuted bracket-capitals.

Shāhjahān replanned the forts at Lahore and Agra and added several buildings within them. In the latter, he even demolished some buildings of sandstone and replaced them by marble ones. The Khāss-Maḥal, Machchhi-Bhawan, Diwān-i-'Am, Diwān-i-Khāss and Moti-Masjid are some of the buildings erected by him in that fort. They are all in marble, displaying tapering shafts, engrailed arches and beautiful relief and inlay-work in coloured stones.

The Khāss-Maḥal ('Private Palace'), built about 1636, overlooks the river and consists of an open pillared pavilion, with five bays in front and three on the sides, flanked by a pavilion each on the north and south, their middle portion covered by 'Bengal' roofs. The courtyard of the Machchhi-Bhawan ('Fish Palace') is enclosed on three sides with arched

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

double-storeyed chambers, with a screen on the river-side. It is said that originally it had marble tanks, which contained fish of gold and silver colours, from which it derives its name.

The Diwān-i-‘Ām (‘Hall of Public Audience’) is a large rectangular courtyard with entrances on the north and south, series of cells on three sides, and with a pillared hall in the middle of the fourth western side. The Diwān-i-Khāss (‘Hall of Private Audience’), built in 1634-37, consists of an outer hall and an inner hall, communicating with each other through three archways. The three-domed Motī-Masjid (‘Pearl Mosque’), which took Shāh-jahān seven years to build at a cost of three lakhs of rupees, is by far the noblest building erected by him in the Agra fort. It rises from a vaulted terrace and contains cloisters on three sides and a marble prayer-hall on the west.

About the same time that Shāhjahān built his Jāmi‘-Masjid in Delhi (below, p. 321), he also constructed in 1648 the Jāmi‘-Masjid at Agra, in honour of his daughter, Jahānārā. It follows the conventional pattern but is half the size of the Delhi mosque. With four-centred arches in place of the usual foliated ones, low domes inlaid with black marble stripes on herring-bone pattern, slender pinnacles flanking the entrance to its prayer-hall, a row of kiosks above the parapet, and without minarets, it looks distinguished but stands no comparison with the Jāmi‘-Masjid at Delhi.

The highest of Shāhjahān’s achievements, however, is the Tāj-Maḥal (pl. LXXXI), tomb of his beloved wife Arjmand Bānū Begam, entitled Mumtāz Maḥal. She died at Burhanpur in 1631, during his campaign in the Deccan and her body was brought to Agra. At the emperor’s order, several designs were received

ISLAMIC MONUMENTS

for the tomb, but the one accepted is said to be by Ustād 'Īsā, a master-builder from Persia. The tomb was commenced by Shāhjahān about 1632, before beginning his constructions in the fort, and took him seventeen years to complete according to some and twentytwo according to others.

The Tāj-Maḥal is the culmination of the conception of a garden-tomb, which had a modest beginning in Sikandar Lodī's tomb, but had advanced to a mature stage in Humāyūn's tomb, both at Delhi (above, pp. 260 and 305). Lying on the left bank of the Yamuna, its rectangular enclosure walled up on three sides, the marble tomb occupies the middle of the fourth side, along the river, with a red sandstone mosque on the west and a matching hall, described as *jawāb* or 'answer', on the east, the latter to serve as a guest-house (*mihmān-khāna*) or assembly-hall (*majlis-khāna*). The square tomb with chamfered corners is built on a raised terrace, with graceful tall minarets at its four corners. As in the Humāyūn's tomb, the tomb-chamber is octagonal, with subsidiary chambers at the angles. This plan is repeated on the second storey, and the building is surmounted by a graceful double dome. In the basement are the graves of Mumtāz Maḥal and Shāhjahān, enclosed within railings of beautifully worked perforated screens.

The Tāj is noted for its graceful proportions and the satisfying balance between the claims of architecture and ornamentation. The profuse use of semi-precious and multi-coloured stones in its floral and arabesque patterns, fine borders, inscriptions in black marble, low relief-carvings, delicate traceries and trelliswork, all executed in or against the background of white marble, lend a unique charm to this world-famous edifice.

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

In 1638 Shāhjahān transferred his capital from Agra to Delhi and laid the foundations of Shāh-jahānābād, the seventh city of Delhi. It is enclosed by a rubble stone wall, with bastions, gates and wickets at intervals. Of its fourteen gates, the important ones are the Mori, Lāhori, Ajmeri, Turk-mān, Kāshmiri and Delhi gates, some of which have already been demolished. His famous citadel, the Lāl-Qal'a, or the Red Fort, lying at the town's northern end on the right bank of the Yamuna and south of Salimgarh (p. 303), was begun in 1639 and completed after nine years. The Red Fort is different from the Agra fort and is better planned, because at its back lies the experience gained by Shāh-jahān at Agra, and because it was the work of one hand. It is an irregular octagon, with two long sides on the east and west, and with two main gates, one on the west and the other on the south, called Lāhori and Delhi gates respectively. While the walls, gates and a few other structures in the fort are constructed of red sandstone, marble has been largely used in the palaces.

From the western gateway after passing through the vaulted arcade, called Chhatta-Chowk, one reaches the Naubat- or Naqqār-Khāna ('Drum-house'), where ceremonial music was played and which also served as the entrance to the Diwān-i-'Ām. Its upper storey is now occupied by the Indian War Memorial Museum.

The Diwān-i-'Ām ('Hall of Public Audience') is a rectangular hall, three aisle deep, with a façade of nine arches. At the back of the hall is an alcove, where the royal throne stood under a marble canopy, with an inlaid marble dias below it for the prime minister. The wall behind the throne is ornamented with beautiful panels of *pietra dura* work, said to

ISLAMIC MONUMENTS

have been executed by Austin de Bordeaux, a Florentine artist. Orpheus with his lute is represented in one of the panels here.

Originally there were six marble palaces along the eastern water front. Behind the Diwān-i-‘Ām but separated by a court is the Rang-Maḥal (‘Painted Palace’), so called owing to coloured decoration on its interior. It consists of a main hall with an arched front, with vaulted chambers on either end. A water-channel, called the Nahr-i-Bihisht (‘Stream of Paradise’), ran down through it, with a central marble basin fitted with an ivory fountain. The Mumtāz-Maḥal, originally an important apartment in the imperial seraglio, now houses the Delhi Fort Museum.

The Diwān-i-Khāss (‘Hall of Private Audience’) is a highly-ornamented pillared hall, with a flat ceiling supported on engrailed arches. The lower portion of its piers is ornamented with floral *pietra dura* panels, while the upper portion was originally gilded and painted. Its marble dias is said to have supported the famous Peacock Throne, carried away by the Persian invader Nādir Shāh.

The Tasbiḥ-Khāna (‘chamber for counting beads for private prayers’) consists of three rooms, behind which is the Khwābgāh (‘sleeping-chamber’). On the northern screen of the former is a representation of the Scales of Justice, which are suspended over a crescent amidst stars and clouds. Adjoining the eastern wall of the Khwābgāh is the octagonal Muthamman-Burj, from where the emperor appeared before his subjects every morning. A small balcony, which projects from the Burj, was added here in 1808 by Akbar Shāh II, and it was from this balcony that King George V and Queen Mary appeared before the people of Delhi in December 1911.

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

The Hammām ('Bath') consists of three main apartments divided by corridors. The entire interior, including the floor, is built of marble and inlaid with coloured stones. The baths were provided with hot and cold water, and it is said that one of the fountains in the easternmost apartment emitted rose-water. To the west of the Hammām is the Motī-Masjid ('Pearl Mosque'), added later by Aurangzeb (below, p. 323). The Hayāt-Bakhsh-Bāgh ('Life-giving garden'), with its pavilions, lies to the north of the mosque, and was later considerably altered and reconstructed. The red-stone pavilion in the middle of the tank in the centre of the Hayāt-Bakhsh-Bāgh is called Zafar-Maḥal and was built by Bahādur Shāh II in about 1842.

In 1644, Shāhjahān commenced in Delhi his great mosque, the Jāmi'-Masjid, the largest mosque in India, and completed it in 1650. Its square quadrangle with arched cloisters on the sides and a tank in the centre is 100 m. wide. Built on a raised plinth, it has three imposing gateways approached by long flights of steps. Its prayer-hall, with a façade of eleven arches, flanked by a four-storeyed minaret on either end, is covered by three large domes ornamented with alternating stripes of black and white marble.

Among other buildings of Shāhjahān's reign in Delhi, important for their association with the royal family, mention may be made of the tombs of Jahānārā and Raushanārā, his daughters. Raushanārā laid out her garden-tomb in 1650, soon after her father had completed Shāhjahānābād. Jahānārā's tomb in Nizamuddin, built by her in 1681 during her lifetime, consists of an unroofed small enclosure, the walls of which are screened with perforated marble slabs. The hollow receptacle on the upper surface of the grave is filled with grass in

ISLAMIC MONUMENTS

accordance with the inscription on it, reading 'Let naught cover my grave save the green grass: for grass well suffices as a covering for the grave of the lowly.' One of the wives of Shāhjahān, Fatehpurī Begam, built in 1650 the famous Fatehpurī mosque in Delhi on the conventional pattern.

Enamelled tiles, which had gained roots at Lahore as the main decorating medium, also penetrated to Agra, as seen in the Chini-kā-Rauza, tomb of Afzal Khān, built during Shāhjahān's reign. At Srinagar in Kashmir, where stone had been brought into use again, in about 1649 was built the Akhund Mullā Shāh's mosque, with brick core and grey granite facing. Kashmir was, however, enriched by Shāhjahān by laying terraces in the Shālimār and Nishāt gardens.

G. AURANGZEB (1658-1707)

Aurangzeb imprisoned his father Shāhjahān, and crowned himself as emperor at Delhi in July 1658, at the Shālimār garden, which contains now only some derelict buildings with patches of floral paintings. After gaining victory over his other three brothers or killing them, he celebrated a second coronation in June, 1659, again at Delhi. The Mughal empire, however, had now started disintegrating, owing to his puritanical beliefs, bigoted behaviour and other external factors. The cultural and intellectual enterprises suffered still worse. With his accession, architecture and fine arts succumbed to a deterioration and oblivion, from which they were never to emerge during the rule of the Mughals. This was no doubt due in a substantial measure to the dislike of arts by the emperor himself.

MONUMENTS OF THE SUR AND MUGHAL DYNASTIES

Shāhjahān's disposition and that of Aurangzeb form a study in contrast. While Shāhjahān joined his subjects in festivities and prayers, and his Jāmi'-Masjid at Delhi was used both by him and his people, Aurangzeb led an isolated life, withdrawing his whole self unto himself. In the Red Fort at Delhi, he built in 1659-60 the small Motī Masjid ('Pearl Mosque') for his private use. At Agra, the Nagīna-Masjid ('Gem Mosque') is also said to have been built by him, for the same purpose, although some authorities would ascribe it to Shāhjahān himself. The Motī-Masjid, entirely of marble, follows the conventional pattern. With its white surface relieved by borders and other designs in black marble, it is no doubt a dainty masterpiece, although its three domes, originally gilded with copper, are perhaps a little too rounded and interfere with its look. Aurangzeb also made some additions to the forts at Delhi and Agra, such as the barbicans in front of the gateways at the former.

The beautiful Zīnatu'l-Masājidin Delhi, built by Aurangzeb's daughter, Zīnatu'n-Nisā Begam, perhaps in about 1711, after her father's death, may be noticed here. Much smaller than the Jāmi'-Masjid built by her grandfather, it resembles it all the same, with its red sandstone facing, white marble domes with black marble flutings and tall minarets.

The reign of Aurangzeb falls into two periods. During the first half, his activities and interests were concentrated in the north; in the second half, his court and family moved to Aurangabad, from where he directed his campaigns in the Deccan. In fact, Aurangabad, was now called the 'Delhi of the South'. To this period belongs the Bibī-kā-Maqbara or the tomb of Rābi'atu'd-Daurānī, Aurangzeb's wife, which was built in 1678 by her son. It

ISLAMIC MONUMENTS

is candidly a replica of the Tāj-Mahal, a little more than half its size, but the result is highly unsatisfying, if not mediocre, on account of its inelegant proportions and exaggerated embellishment. Its screen enclosing the grave, however, is very finely carved with competent workmanship.

H. THE LATER MUGHALS (1707-1857)

Aurangzeb died in 1707, and the Mughal empire now disintegrated fast, although the successors of the great Mughals continued reigning over the dismembered dominions till 1857. This period was marked by mutual dissensions, gradual entrenchment of foreign powers and raids by the Persian adventurers Nādir Shāh and his successor in Afghanistan, Aḥmad Shāh Durrānī. The kings had neither the resources, nor inclination, to erect any major monuments. The only exception is provided by the tomb of Mīrzā Muqīm Abul-Mansūr Khān, entitled Safdar-Jang, who was the viceroy of Oudh under Muḥammad Shāh (1719-48) and later on prime minister under Aḥmad Shāh (1748-54). The tomb was built in about 1754 by Shujā'ud-Daula, Safdar Jang's son. The tomb is the last example of the pattern which began with Humāyūn's tomb. Enclosed within a large garden, divided into squares on the *chārbāgh* pattern, with tanks and fountains along the central pathway, with a gate on the east and pavilions on the other three sides, the tomb proper stands out in the centre of the enclosure. It is a square double-storeyed structure built on a raised terrace and surmounted by a bulbous dome of marble. Red and buff sandstone has been used in its facing, a large proportion of which was stripped off from 'Abdu'r-Raḥīm Khān-i-Khānān's tomb (above p. 315). The marble panels on

MONUMENTS OF THE SŪR AND MUGHAL DYNASTIES

its corner-towers are pleasing but rather florid. In fact, its exaggerated ornamentation and lack of proportions, evidenced particularly by its vertical elevation, rob it of the character of a great building, although it has been rightly described as 'the last flicker in the lamp of Mughal architecture at Delhi'.

6. MONUMENTS OF THE NAWABS OF OUDH AND SULTANS OF MYSORE

Late in the eighteenth century, the Nawabs of Oudh became independent, bound by certain treaties with the British, and the centre of political power shifted to that quarter. So did the patronage of arts, architecture and literary pursuits. At Lucknow, which was the capital of Oudh, numerous buildings were erected by the Nawabs. They fall into two phases : an earlier one which succeeded the declining Mughal style of Delhi, and a later one which also incorporated certain features of European architecture. In both, brick was the main building material, while ornamentation was executed in plaster. To the earlier phase belong the Imāmbāra, with its mosques, courts and gateways, all built by Nawab Āsafu'd-Daula (1775-95). These buildings are spacious and impressive, but their ornament is too florid. The second phase was inspired by a chateau built in a bizarre European fashion by General Claude Hastin (1735-1800), a French adventurer in the employ of the Nawabs. From it the Nawabs incorporated triangular pediments, Corinthian capitals, and circular Roman arches, and combined them with the indigenous fluted domes, ogee arches and arabesque patterns. Buildings in this hybrid character are the Chhattar-Manzils and the gateways to Sikandara-Bāgh and Kaisar-Bāgh.

ISLAMIC MONUMENTS

In south India, at Mysore, where Haidar 'Ali, the chief minister of the Hindu kingdom, had usurped the throne in 1761, some monuments were erected by his son, Tipū Sultan, in a distinct style which deserves mention. It is characterized by engrailed arches, octagonal multi-storeyed minarets, turrets of the same appearance and a hemispherical but flattened dome, with a frieze of petals at the neck. The Darya-Daulat-Bāgh contains a pavilion of graceful proportions with mural paintings and served as a place of retreat. The Gumbaz, where Haidar 'Alī, and Tipū Sultan and his mother lie buried, is a square structure, surrounded by a corridor, with minarets at the corners and a typical dome in the centre with turrets around it. The Jāmi'-Masjid in the fort also contains typical minarets, with numerous pigeon-holes disposed over its body.

7. OTHER FORTS AND PALACES

Not many palaces of the early Hindu rulers of medieval times have survived. It is clear, however, that certain features which characterize the Islamic construction were not confined merely to Muslim forts, palaces, mosques and tombs, but were also incorporated by the Hindus, who also made use of some of the indigenous features, and planned their buildings to suit their customs and ways of living.

Rajasthan, central India and parts of south India are rich in such palaces. Among the pre-Mughal Hindu palaces the only one of note is the Mān-Mandir in the fort at Gwalior built by Raja Mān Singh (1486-1516). Situated as it is on a cliff, the long façade of the fort broken by circular towers at regular intervals crowned with domed cupolas, the principal ones among which were originally gilded by copper,

OTHER FORTS AND PALACES

it is at once striking (pl. LXXXIIA). Balconied windows with their roofs finishing in small pyramidal tops and arcades of sunk corbelled arches, the whole surmounted by a running *chhajja*, are other features of its façade. Within, the courtyards have beautifully carved corbelled openings, corrugated roofs, and glazed tiles of Hindu designs. The rooms are, however, small. Bābur was impressed only by this one among the Hindu palaces, and Akbar no doubt borrowed some of the architectural features from it.

The palaces built during the Mughal times may be different from each other in plan, but they have certain common architectural features, such as balconies supported on carved brackets, pillared kiosks crowned by domes, arcades of sunk arches, foliated arches, latticed screens, curved 'Bengal' eaves and flat domes rising from a rectangular base. Situated as these palaces often are on rocky heights, they look very impressive. Among the important palaces may be named those at Amber, Jaipur, Bikaner, Jodhpur, Udaipur, Jaisalmer, Orchha and Datia.

In south India, the Islamic principles of construction penetrated into the Hindu palaces much more gradually. At Hampi, the capital of the Vijayanagara kingdom, about 1575 was built the double-storeyed pavilion called the 'Lotus'-Maḥal on a square plan with double recesses at the corners. While its pillars and concentrically recessed arches are Islamic, the pyramidal roofs of its pavilions, *chhajjas* and stucco decoration are Hindu. The three-storeyed palace at Chandragiri (pl. LXXXII B), built early in the seventeenth century, is much larger; but here again, the façade has series of arches, while towers at the corners and above the entrance are pyramidal. The palace of Tirumala Nāyaka (1623-59), at Madura, contains aisles of massive round columns derived

ISLAMIC MONUMENTS

from European architecture. Although impressive, it hardly possesses dignity or coherence.

Y. D. SHARMA



Fig. 5

IX. MUSEUMS ¹

CONTENTS

	PAGE
1. Introduction	329
2. Growth of museums	330
A. Early phase (1784-1857)	330
B. Participation of Indian States (1857-98)	333
C. From Curzon to Marshall (1898-1928)	334
D. Period of popular participation (1928-47)	335
E. Post-Independence period (1947-63)	338
3. Important museums	339
A. The National Museums	340
B. State Museums	342
C. Local museums under the Archaeological Survey of India	347
D. Museums under corporate or civic bodies	350
E. Museums of learned societies	352
F. University museums	353
4. Acknowledgements	354

1. INTRODUCTION

THE MUSEUMS IN INDIA HAVE A MARKED BIAS IN FAVOUR of archaeological material: out of a total number of somewhat less than two hundred museums, more than one hundred are meant either exclusively or largely for antiquarian exhibits. The earliest museums, however, had no such predilection, specially in their initial years, when collections pertaining to geology

¹ For places where museums are located see map, fig. 6, p. 355.

MUSEUMS

and natural history took the place of honour. Writing in 1936, Markham and Hargreaves observed : 'This bias (for archaeology) is understandable when we realise the pride that the cultured Indian takes in the history of his country, and the comparative ease with which archaeological material can be secured.' The statement cannot be regarded as wholly correct : actually, the bias was the outcome of certain trends of historical circumstances and was by no means the sole precondition for the growth of museums in the country. The awareness of the Indian people of their proud cultural heritage is itself a historical phenomenon born out of the endeavours of a few European savants in the late eighteenth and nineteenth centuries, at times promoted by other factors ; had this awareness been present earlier, India would certainly not have waited for a Jones and a Cunningham for the inauguration of her oriental studies and archaeological pursuits. Furthermore, the easy availability of material does not by itself presuppose museums to house it unless favourable factors for their growth are present. In fact, *disjecta membra* of ancient monuments as well as detached archaeological remains abounded on the soil all the while ; yet no museums had been organized before the introduction of new ideas. This was because that the concept of preserving objects as relics of the past, as the epitome of national glory, did not exist earlier even in a dormant state. This and many other allied trends come out in relief once the history of museums in India is traced.

2. GROWTH OF MUSEUMS

A. EARLY PHASE (1784-1857)

Ancient literature no doubt speaks of *chitraśālā* (picture-gallery), etc. Also there are records of royal

GROWTH OF MUSEUMS

antiquarians like Fīrūz Shāh Tughluq (1351-88), who went to the extent of bringing two colossal Aśokan pillars from distant places to his capital, Delhi. Yet museums as one understands today did not exist either in ancient or medieval India. The foundation of great museums in some European capitals in the second half of the eighteenth and early nineteenth centuries must have inspired the building of museums on those lines at the important centres of British administration in India. In fact, the first museum-collection in India dates as long back as 1796—only forty years after the inception of the British Museum in London and three years after France had thrown open the palace of the Louvre as the museum of the Republic—an act that thrilled the world. In that year, 1796, the Asiatic Society (later on successively called the Asiatic Society of Bengal and the Royal Asiatic Society of Bengal and now again the Asiatic Society), founded in Calcutta in 1784 by a band of enthusiasts led by the brilliant scholar Sir William Jones, felt the need to house the many 'curiosities' that had accumulated as a result of the collection of archaeological, ethnological, geological and zoological specimens by its members. But it was not until 1814 that the Society was able to establish a museum, and that was because in that year Dr. Nathaniel Wallich, a Danish botanist, offered his honorary services as the curator and thus became the first curator of the first museum in India. The Asiatic Society Museum then had two sections—the first dealing with archaeology, ethnology and technology under the care of the librarian of the Society and the second with geology and zoology under the charge of Wallich; the second section, specially the zoological part of it, had a rapid growth. It was only since 1862—a year after the formation of the Archaeological

MUSEUMS

Survey of India—that archaeology came to the fore in the Museum, thanks to Sir Alexander Cunningham whose indefatigable zeal in the collection and study of archaeological material not only greatly augmented the archaeological collection of the Museum but also aroused widespread interest in Indian archaeology. It is this Asiatic Society Museum that provided the nucleus of the Indian Museum founded under the Indian Museum Act, 1866, though the present building in Chowringhee was made available later on, in 1875.

An effort to build up a museum in Madras had been made as early as 1819, but with hardly any result. In 1843 the Madras Literary Society, a branch of the Royal Asiatic Society, requested the Government to form a museum of economic geology. The Court of Directors of the East India Company agreed to this proposal, and the Central Museum, originally intended to be a real 'central' museum with branches, was opened in 1851 at the College of Fort St. George, wherefrom it moved to the present building of the Museum in Egmore in 1854. The personal enthusiasm of Assistant Surgeon Edward Green Balfour, who offered his services to be the officer-in-charge in 1850, was mainly responsible for the rapid growth of the Museum; which, by 1856, had established six local museums; but all of them except one had to be closed down within five years of their birth.

During this period, about a dozen museums, including those of Bombay and Karachi, the latter now in Pakistan, came into being. Their growth was largely due to the initiative of European individuals, often backed by the Government, which enabled them to come up and survive. Impetus for their emergence in the fifties of the century was also provided by the Great Exhibition of 1851 in London. By and large these museums had no special bias for archaeology,

GROWTH OF MUSEUMS

which formed only a part of their total collection, the emphasis being generally on geology and other natural sciences, and this was motivated to a great extent by the necessity of assessing the natural wealth of the country; they were essentially research-museums, the concept of public museums being then far off.

B. PARTICIPATION OF INDIAN STATES (1857-98)

This period is notable for the fact that for the first time the rulers of Indian States came forward to participate in the museum-movement; ten out of the sixteen museums that sprang up during the period owed their origin to the munificence of such rulers. The Maharaja of Travancore patronized the building up of a museum at Trivandrum in 1857; shortly afterwards, in 1866, Mysore organized one at Bangalore. As soon as the repercussions of the upheaval of 1857 were over, two museums in British India were established in 1863, one at Lucknow and the other at Nagpur. A fresh impetus both in the British territory and in the Indian States was provided by the celebration of the Jubilee of Queen Victoria in 1887; the museums at Jaipur, Udaipur, Rajkot, Vijayawada, etc., were its outcome. The starting of the Raipur Museum in 1875 out of the gift of Mahant Ghasidas, Chief of Nandgaon, shows, however feebly, the rising public interest in the movement.

Amongst the museums of this era, the one at Mathura (later on the Curzon Museum of Archaeology and now the Museum of Archaeology), started in 1874 by F.S. Growse, stands as a landmark in the history of the archaeological museums in India, as this was the first museum housing exclusively archaeological relics derived from a particular region and may be therefore regarded as the forerunner of the

MUSEUMS

'local museums' that became a conspicuous feature in the succeeding period.

C. FROM CURZON TO MARSHALL (1898-1928)

The arrival of Curzon as Viceroy in 1898 and the appointment of John Marshall as the Director General of Archaeology in India in 1902 opened a new era in the history of museums in India, which resulted in creating not less than thirty museums—all with an entirely archaeological orientation—spread all over India. The Archaeological Survey of India itself founded local museums at Sarnath (1904), Agra (1906), Ajmer (1908), Delhi Fort (1909), Bijapur (1912), Nalanda (1917) and Sanchi (1919), besides others—some of them now in Pakistan. Markam and Hargreaves observe : 'It has been the policy of the Government of India to keep the small and movable antiquities, recovered from the ancient sites, in close association with the remains to which they belong, so that they may be studied amid their natural surroundings and not lose focus by being transported.' This commendable practice, prevalent also outside India, has had its continuity in the post-Independence period, in spite of occasional and ill-informed criticism. In 1939 Sir Leonard Woolley recommended the closing down of the most of the local museums maintained by the Archaeological Survey of India, but the Government of India did not rightly agree to this.

A new tendency in the form of organizing museums in learned societies made its appearance : museums of the Bangiya Sahitya Parishad, Calcutta (1910), Bharatiya Itihasa Samshodhak Mandal, Poona (1910), and Andhra Historical Research Society, Rajahmundry (1928), belong to this category. Further, the Indian States went ahead with the starting of museums in their respective regions.

GROWTH OF MUSEUMS

The origin of the museums of this period may be ascribed to four different sources of patronage, viz., (i) Government (generally the Archaeological Survey of India), (ii) the Indian States, (iii) learned societies and (iv) civic bodies and private individuals. The participation of European individuals was no longer a factor to be reckoned with.

Three out of the four above-mentioned sources combined to give birth to the Prince of Wales Museum of Western India in Bombay. In 1904, the Government of Bombay appointed a committee to examine the question of having a museum for the city. In 1905, the people of Bombay decided that a public museum should be a fitting permanent memorial to the visit to the city of their Royal Highnesses the Prince and Princess of Wales. The site on which the present Prince of Wales Museum stands was given by the Bombay Government, which also assured yearly grants. The Bombay Municipality constituted a fund of 300,000 rupees for its running. Sir Currimbhoy Ibrahim added to it an equivalent sum and Sir Cowasji Jehangir 50,000 rupees as their donations. The Museum was thrown open to the public in 1921.

D. PERIOD OF POPULAR PARTICIPATION (1928-47)

Out of about three dozen museums that came into being between 1928 and 1947, about a dozen owed their origin exclusively or largely to the efforts of the private organizations or individuals. By then the museum-movement had taken its roots in the soil and despite a world-wide depression, which hit the Archaeological Survey hard, and the Second World War, the period produced a fairly rich crop of museums. The Indian States were again at the fore and gave rise to at least

MUSEUMS

seventeen museums. More museums in the premises of the learned societies, such as the Rajwade Samshodhan Mandal (1932) and Kannada Research Society (1904), were set up. It is interesting to note that the collection of the Kamarupa Anusandhan Samiti, Gauhati, and the collections of two professors of the Ravenshaw College, Cuttack, eventually grew into the Provincial Museums of Assam and Orissa respectively. Municipalities and other civic and corporate bodies also rose to the occasion and accelerated the pace of the movement. Universities did not lag behind, the first university museum of archaeology being the Asutosh Museum of Fine (now Indian) Art founded in 1937 by the University of Calcutta.¹ Another new aspect was the rise of temple museums in the south under the patronage of the Devasthanam Committees; one such museum, organized in 1935, is Sriranganathasvami etc. Devasthanam's museum at Srirangam. All these developments show that in the growth of the archaeological museums during this period the Government, or more precisely the Archaeological Survey of India, was not the only participant. Markham and Hargreaves are right in stating : 'The discoveries of the Archaeological Survey, by adding so substantially to the history of India and awakening world-wide interest in its art and antiquities, have stimulated in no small measure feelings of nationalism and directed the attention of Indians to the need for preserving their archaeological treasures, which generally have added virtue of being more pest-resistant than most material.' The seed that had been sown in the preceding period thus started reaping fruits in this, which witnessed, as well, the mass-awakening in

¹ It may be mentioned here that the first college museum in India was set up by the pioneer missionary William Carey at Serampore, West Bengal, as early as 1818.

GROWTH OF MUSEUMS

India; perhaps the museum-movement reflects something of that national upheaval.

During this period the Archaeological Survey, once the pioneer in the movement, played a subdued rôle, largely owing to financial difficulties; notable, however, is the organization, in 1929, of the Central Asian Antiquities Museum (now merged with the National Museum) at New Delhi, formed out of the collections of Sir Aurel Stein from his expeditions to Chinese Turkestan. The closing years of this period, with the coming of Dr. (now Sir) Mortimer Wheeler as the Director General of Archaeology in India, brought indications of a great change—the centralization of direction in local museums of the Archaeological Survey of India and the proposal for the formation of a National Museum of Art, Archaeology and Anthropology. Thus, the recommendations of the Markham-Hargreaves report that the museums of the Archaeological Survey of India should be brought together under one administrative control was given effect to in 1946, when a Museums Branch came into existence within the Survey. This was a great contribution to an expanding movement, which, together with infusion of the idea of a National Museum, was then practically on the threshold of a revolutionary change. ‘The question of the formation of a National Museum of India’, says Ghosh, ‘had been sporadically receiving the attention of the Government for a long time. The first effective step towards the establishment of such a museum was taken in 1945, when, on the initiative of Wheeler, a committee, with Sir Maurice Gwyer as the Chairman, was set up to report on the functions, administration, organization, etc., of the Museum. The committee reported in 1946, and from then to 1949, when the Museum was inaugurated, Wheeler and his successor vigorously

MUSEUMS

pursued the matter so that it was not shelved once again.'

E. POST-INDEPENDENCE PERIOD (1947-63)

The greatest event of this period is the formation or recognition of the National Museums in India, now altogether three in number. Of the three, the first to be constituted was the National Museum, New Delhi, under the aegis of the Archaeological Survey of India. In 1948, an exhibition of objects which had been taken to a London exhibition a year earlier took place in New Delhi. This formed the nucleus of the National Museum, which was declared open on the 15th August 1949. The task of nurturing the new organization fell on the Archaeological Survey of India, which continued to be responsible for it till 1958, when the Museum became an independent institution. Two other museums, the Indian Museum, Calcutta, and the Salarjang Museum, Hyderabad, have recently been given the status of National Museums.

Apart from these National Museums, more than thirtyfive archaeological museums have been founded in the post-Independence period. These include local museums of the Archaeological Survey of India, the establishment of which received a fresh fillip—three museums near ancient sites (Amaravati, Kondapur, and Bodh-Gaya) and four more near temple-sites or within palaces or forts (Hampi, Fort St. George, Madras, Halebid and Seringapatam) were organized between the years 1948 and 1963. Of them, the one at Kondapur was taken over from the Hyderabad Government; the Fort St. George Museum mainly houses objects of the early British period in the south, and the one at Seringapatam relics associated with Tipū Sultan.

GROWTH OF MUSEUMS

A few more museums at excavated sites like Rupar, Lothal and Ratnagiri are likely to be set up within the next few years. The existing university museums, art-galleries, temple museums, historical museums, etc., likewise, have received support both from the Government as well as from the public.

But the greatest change that has been ushered in during this period is the change in outlook, the growing realization that the physical growth of museums is not an end in itself; the qualitative aspects that aspire to democratize these institutions are now receiving greater emphasis. Every effort is being made to re-organize the museums on modern lines with improved methods of display, etc. The conception of public museums—museums as a means of general education—is now fast gaining ground. For the first time museology as a subject is being taught in some universities in India; training abroad is also receiving attention. The Government of India is providing each year grants-in-aid to museums for extensions to buildings and general improvements, including publications. Above all, the National Museum, New Delhi, is engaged in setting up an example of an ideal public museum with all modern ideas of effective display and educational facilities.

3. IMPORTANT MUSEUMS

It is evident from the foregoing that present-day India has different types of archaeological museums, controlled and financed by different categories of administrative bodies ranging from the Central Government to temple-committees. On grounds of administrative control and finances, they may be divided broadly under seven categories, viz., the National Museums, State Museums, local museums under the

MUSEUMS

Archaeological Survey of India, museums under the control of civic or corporate bodies, museums of learned societies and university museums. There are other museums with a local character, of which the Art-gallery at Thanjavur houses a number of excellent south Indian bronzes (pl. XCV) and stone sculptures. A brief description of the salient features of the representative museums under each category is given below. Out of consideration of space and the relative unimportance of the collections a large number of museums have not been mentioned.

A. THE NATIONAL MUSEUMS

INDIAN MUSEUM, CALCUTTA (1814)¹.—The Archaeological Section of the Museum represents the finest and the largest collection of archaeological and historical material in India. Its enormous collection of Stone Age tools from all over India, including that of the Yale-Cambridge Expedition of 1935, and excavated finds from Harappa, Mohenjo-daro and other chalcolithic sites in Sind and megalithic sites from the south, besides a portion of the copper-hoard from Gungeria, offer an important, even indispensable, source for prehistoric and protohistoric studies. It is remarkably rich in sculptures ranging in date from the third century B.C. to the late medieval period—the bull-capital (pl. LXXXIV) from Rampurwa (now in the Rashtrapati Bhawan, New Delhi), the *kalpa-druma* capital, Śrī-Lakshmī and the *yakshas* from Patna—are some of the priceless pieces of the early series. In a separate gallery are housed the re-assembled *stūpa*-railings and one of the four gateways of the Bharhut

¹ Numerals within bracket indicate the date of establishment of the respective Museum.

IMPORTANT MUSEUMS

stūpa (pl. LXXXV A). There is no other museum in India where there is such a varied collection of Gandhāra sculptures (pl. LXXXVI B), recovered from sites like Taxila, Jamalgarhi, Sahribahlol, Takht-i-Bahi, Peshawar, the Swat valley and Charsada. Some masterpieces from Khajuraho (pl. XCIII) and of Pāla art (pl. XCIV A) are exhibited in its medieval sculpture gallery. This Museum is also one of the richest repositories of Indian coins in the world and includes many rare issues. Of the reliquaires, the most important is a vase from Piprahwa, the inscription on which is datable to the fourth century B.C.

SALARJANG MUSEUM, HYDERABAD (1951).—This Museum owed its origin to the life-long mission of Mir Yusuf Ali Khan, the last of the illustrious Salarjang family of Hyderabad, to acquire curios from different parts of the globe. At present this is the largest museum in India of medieval and modern arts and crafts; it houses also a collection of toys and dolls exclusively meant for children. No less important is its collection of manuscripts, which include many an illuminated Quran and beautifully-illustrated classical works by eminent poets. An emerald and ruby-dagger of Nūrhahān, a dagger encrusted with diamonds, rubies and emeralds belonging to Jahāngīr and equally attractive swords and daggers of Shāhjahān, Aurangzeb, etc., are some of the unrivalled exhibits in its arms-collection. Some pieces of furniture associated with Louis XIV and Louis XV have also found their way into this Museum.

NATIONAL MUSEUM OF INDIA, NEW DELHI (1949).—The Museum is rich in protohistoric materials recovered from sites like Harappa, Mohenjo-daro, Jhukar, Jhangar, Amri, Nal, etc. Sculptures, ranging in date from the time of Aśoka to the late medieval period, include quite a number of remarkable pieces

MUSEUMS

of Indian art, viz., standing Buddha, bathing woman (pl. LXXXVI C) and a Bacchanalian scene from Mathura and a *vidyādhara* couple from Aihole (pl. XCIB), etc. Other important collections include terracottas from the Indus valley sites, Ahichchhatrā, Kauśāmbī, Kondapur, Nālandā, etc., besides textiles and Persian and Arabic manuscripts. The figures of Gaṅgā (pl. LXXXIX) and Yamunā from Ahichchhatrā, the largest terracotta sculptures in India, are in this Museum. The bronzes include a few superb Chola pieces as well as those representing the medieval eastern school; the dancing girl from Mohenjo-daro is on the view here. It has a very rich collection of paintings, particularly strong in the Rajput and Pahari schools. The magnificent collection of the Central Asian Antiquities Museum, including the famous wall-paintings, has now been transferred to this Museum by the Archaeological Survey of India.

B. STATE MUSEUMS

RAJPUTANA MUSEUM, AJMER (1908).—This is one of the oldest archaeological museums in Rajasthan. The important exhibits here comprise Brāhmaṇical and Jaina sculptures, stone and copper-plate inscriptions, coins and Rajput paintings.

GOVERNMENT MUSEUM, BANGALORE (1866).—The archaeological collection mainly consists of Hoysala sculptures from Halebid and Belur. Antiquities from Brahmagiri and Chandravalli are also seen here, in addition to coins of Mysore rulers.

BARODA MUSEUM AND PICTURE-GALLERY, BARODA (1894).—The Museum, the largest and the most important in Gujarat, displays in its Archaeological Section objects from the Harappan times to the fifteenth century A.D.; of the collection of bronzes, the *mātrikās* of Idar and the Jaina bronzes from Akota (pl. XCII A)

IMPORTANT MUSEUMS

are noteworthy. The collection of Indian paintings representing different schools and the international sections are of great attraction to visitors.

ORISSA STATE MUSEUM, BHUBANESWAR¹ (1932).—Prehistoric tools, stone and metal sculptures, palm-leaf manuscripts, wood-carvings, etc., mainly recovered from Orissa, are exhibited here.

BHURI SINGH MUSEUM, CHAMBA (1908).—The Museum, started by Raja Bhuri Singh with an idea of preserving the ancient relics pertaining to the history of the then Chamba State, houses archaeological objects like sculptures, stone and copper-plate inscriptions, sculptured fountain-stones, wood-carvings, historical documents and a large number of paintings.

STATE MUSEUM, DHUBELA² (1937).—Jaina images of *Tirthaṅkars*, *yakshas* and *yakshīs* and a group of Devī images from Gurgi, etc., form important collections of its sculpture-gallery. Noteworthy in its epigraphical collections are inscriptions of the Kushan and Gupta periods, early copper-plate grants and several Kalachuri records.

STATE MUSEUM, GAUHATI (1940).—The principal attractions of this Museum are stone and metal sculptures, inscriptions including two charters of Bhāskaravarman (seventh century) and Assamese manuscripts written on thin barks.

ARCHAEOLOGICAL MUSEUM, GWALIOR (1922).—The sculptures of this Museum, covering a period from the third century B.C. to the seventeenth century A.D., include many outstanding specimens of Indian art like the palm-capital from Besnagar, panel depicting dance-scene (pl. XCI A) and terracotta heads from Pawaya, the lion-capital from Udaigiri, Māñibhadra

¹ Originally at Cuttack.

² Originally at Rewa.

MUSEUMS

yaksha and the mother-and-child from Badoh. An inscription of Kumāragupta is an important exhibit. Apart from the collection of Rajput and Mughal paintings, it has fine copies of the wall-paintings of the Bagh caves.

HYDERABAD MUSEUM, HYDERABAD (1930).—Sculptures dating from the Sātavāhana period (first-second century) to the time of the Kākatīyas (thirteenth century) are housed here. There are also fine collections of old arms and weapons and of Bīdrī Ware. The other important features of this Museum are the copies of Ajanta and Ellora paintings, manuscripts in Arabic and Persian and coins of the Yādavas, the Vijayanagara rulers, Mughals and of the Bahmanī and other Deccan kingdoms. The prehistoric and protohistoric finds from Maski and other sites in Raichur District are here exhibited. Excavated finds from Yelleswaram are housed in a separate pavilion, attached to the office of the Director of Archaeology.

CENTRAL MUSEUM, INDORE (1929).—It possesses a rare collection of manuscripts and ancient ornaments, besides inscriptions on stones and bricks as well as sculptures. Pottery from Kasrawadh with Mauryan inscriptions on them is very interesting.

GOVERNMENT CENTRAL MUSEUM, JAIPUR (1876).—The archaeological adjunct of the Museum contains excavated finds from Bairat, Sambhar and Rairh; other objects of interest are *yūpa-stambhas* from Barnala and sculptures from Abaneri and Amber.

DOGRA ART-GALLERY, JAMMU (1954).—The greatest attraction of this Museum is its collection of more than four hundred Pahari paintings. It has also a fine collection of historic arms, textiles and manuscripts including the *Shāh-nāma*, *Sikandar-nāma*, etc.

STATE MUSEUM, LUCKNOW (1863).—The Archaeological section of this Museum includes Brāhmaṇical,

IMPORTANT MUSEUMS

Buddhist and Jaina images from various sites of Uttar Pradesh, of which the Jaina sculptures from Kañkāṭī-tilā, Mathura, and the *Rāmāyaṇa*-tablets from Saheth-Maheth occupy a place of distinction. Its numismatic collection is rich in the punch-marked, Gupta and Mughal series. Equally rich are its collections of paintings and manuscripts.

GOVERNMENT MUSEUM AND NATIONAL ART-GALLERY, MADRAS (1851).—In the collection of the specimens of plastic art and metal sculptures the Archaeological Section of this Museum holds definitely a pre-eminent position. The bas-reliefs from Amara-vati, Goli and other Buddhist sites in the Krishna valley, Jaina antiquities from Danavulapadu and sculptures and architectural pieces of the Pallava, Choḷa and other later periods form invaluable collections of this Museum. But nothing can parallel its large and varied collection of south Indian bronzes—the richest in the world. The images of dancing Śiva, including the world-famous Nāṭarāja of Tiruvelangadu (pl. XCVI), occupy a singular position; equally prominent are the excellent Śaivite (pl. XC), Vaishṇavite, Jaina and Buddhist metal images collected from different parts of south India. Also there is an enormous collection of copper-plate charters issued by south Indian rulers. Of immense importance are the protohistoric antiquities from Adichanallur, Perumbair and other megalithic sites and also the unique Bruce Foote collection of stone implements, purchased by the Museum in 1904.

MUSEUM OF ARCHAEOLOGY, MATHURA (1863).—Sculptures mostly in red sandstone, collected from Mathura and its neighbourhood and comprising royal statues, including those of Vima Kadphises, Kanishka, Chashtana, etc., and Brāhmanical, Buddhist and Jaina images, mostly datable to the Kushan period,

MUSEUMS

are the proud possession of this Museum. In fact, this Museum 'ranks foremost for the study of history and art of the Kushan period'. It has a rich collection of terracottas dating from Mauryan to the medieval times.

CENTRAL MUSEUM, NAGPUR (1863).—The Archaeological Section contains antiquities ranging from the Early Stone Age to medieval times; they form an indispensable source for the reconstruction of the history of the region. There are stone and copper-plate inscriptions of the Chālukyas, Kalachuris of Tripurī, Ratanpur and Raipur and of the Vākāṭakas and the Rāshtrakūṭas, besides sculptures and metal images. The Mughal and Bhonsla paintings and a Babylonian cylinder-seal of about 2000 B.C. found at an unknown site in India are also noteworthy.

GOVERNMENT MUSEUM, PATIALA (1947).—A collection of Gandhāra sculptures and Brāhmaṇical and Jaina antiquities, in addition to a collection of Pahari paintings, form the notable exhibits in this Museum.

PATNA MUSEUM, PATNA (1917).—It has a splendid collection of sculptures comprising the famous Didarganj *yakshī*, a polished lion-head from Masarh and the two Jaina torsos of *Tīrthaṅkars* from Lohanipur, all the four of Mauryan age, besides examples of Śuṅga, Gupta and Pāla art, the last-mentioned series including one of the earliest dated images of the time of Devapāla (ninth century). A large number of bronzes of Pāla and Sena periods, including the treasure-trove bronzes from Kurkihar (pl. XCII B), have considerably enriched the Museum-collection. It is also rich in terracottas collected from places like Pāṭaliputra, Buxar, Mathura, Kauśāmbī, Bhita, Rajgir, Vaiśālī, etc. Another important group of finds comprises ring-stones carved with fertility-designs from Pāṭaliputra. Stone and Copper Age implements from different

IMPORTANT MUSEUMS

parts of Bihar are also on show here. No less significant is its collection of Tibetan banners and coins, particularly punch-marked ones.

MAHANT GHASIDAS MEMORIAL MUSEUM, LAIPUR (1875).—It has interesting post-Gupta and Kalachuri sculptures, a small collection of Buddhist bronzes from Sirpur (seventh-eighth century), an inscribed wooden pillar from Kirari (second century) and copper-plates of the Śarabhapurīyas, Somavamśis and Kalachuris of Dakṣiṇa-Kosala.

SRI PRATAP SINGH GOVERNMENT MUSEUM, SRINAGAR (1898).—The Archaeological Section of the Museum displays sculptures ranging from the fifth to the fifteenth centuries and coins of Indo-Bactrian, Indo-Scythian, Kushan, and Gupta and other kings. A special attraction of this Museum is its collection of about three hundred paintings, mostly of the Kangra school, and textiles.

ARCHAEOLOGICAL MUSEUM AND PICTURE-GALLERY, TRICHUR (1938).—Amongst the archaeological exhibits noteworthy are the finds from the megalithic monuments of Cochin and mid-Kerala, some excavated finds showing Roman contacts, inscriptions dating from the tenth to the eighteenth centuries and wood-carving and metal images of *circa* eleventh century. Copies of more than one hundred panels of mural paintings from the Mattancheri Palace, Cochin, and Vaḍakkunnāthan temple, Trichur, are on view here.

C. LOCAL MUSEUMS UNDER THE ARCHAEOLOGICAL SURVEY OF INDIA

ARCHAEOLOGICAL MUSEUM, AMARAVATI (1951).—The Museum, which is at present only a sculpture-shed, contains many pieces of carved architectural fragments of the *stūpa* as well as of its railing recovered

MUSEUMS

from the famous Buddhist site, which range in date from the second century B.C. to the third century A.D. The place of pride is occupied by a small group of limestone sculptures (pl. LXXXV B), unmistakably imprinted with Bharhut tradition. There are beautiful sculptures datable to the medieval period as well. A new museum-building is being constructed here.

ARCHAEOLOGICAL MUSEUM, BIJAPUR (1912).—The collection includes stone inscriptions in Arabic, Persian, Sanskrit and Kannada, Brāhmaṇical and Jaina sculptures, Arabic, Persian, and Urdu manuscripts, arms and weapons, chinaware, wood-carvings, maps and valuable ancient carpets, found at Bijapur and its neighbourhood.

ARCHAEOLOGICAL MUSEUM, BODH-GAYA (1956).—The exhibits consist of stone and metal images, mostly of the Pāla period. Two *yakshīs*, datable to the first century B.C., are also on view here.

DELHI FORT MUSEUM, DELHI (1909).—Antiquities like inscriptions of the Sultanate and Mughal periods, arms, old documents like *farmāns*, *sanads* and maps, relics of the 1857-upheaval, carpets, manuscripts and specimens of calligraphy, dresses, etc., of the Mughal period are displayed in this Museum.

ARCHAEOLOGICAL MUSEUM, HALEBID (1962).—Sculptures (pl. XCIV B) and architectural pieces of the Hoysala period form the collection in this open-air Museum at the site of the old Hoysala capital, which is full of temples.

ARCHAEOLOGICAL MUSEUM, HAMPI (1953).—Most of the sculptures and architectural pieces belong to the Vijayanagara period and were recovered from the site of the ancient capital of the Vijayanagara kings.

ARCHAEOLOGICAL MUSEUM, KHAJURAHO (1910).—About two thousand sculptures and architectural pieces representing three principal faiths, i.e. Buddhist

IMPORTANT MUSEUMS

Brāhmanical and Jaina, all of the tenth to twelfth centuries, are on show in this open-air Museum. Some of them are masterpieces of medieval central Indian art.

ARCHAEOLOGICAL MUSEUM, KONDAPUR (1952).—The exhibits here include a rich collection of terracotta figurines, beads, pottery, etc., datable to the Sātavāhana period. There is also a collection of Stone Age tools. Figurines made of kaolin are also on view.

FORT ST. GEORGE MUSEUM, MADRAS (1948).—The records and antiquities in the Museum offer scope for the study of the growth of Fort St. George, Madras, the first British settlement in India, in particular and early Indo-British history in general. There are arms, manuscripts, paintings, prints, coins, medals, textiles, porcelain, etc., of that period.

ARCHAEOLOGICAL MUSEUM, NAGARJUNAKONDA (1949).—Excavated materials from the Early Stone Age to medieval times are housed in two different buildings in the valley, which is now threatened with submergence as a result of the construction of a dam across the Krishna. A new museum-building on a safe hill-top is, however, now complete and will soon be thrown open. Sculptures (pl. LXXXVII) datable to the third-fourth century are the principal objects of attraction, though the museum is equally rich in many other classes of Indian antiquities. This is the only site in India where the important salvaged monuments have been reconstructed at places above submergence-level. The new Museum will be the first island-museum in India.

ARCHAEOLOGICAL MUSEUM, NĀLANDĀ (1917).—This Museum has a fine collection of stone and bronze images of the Buddhist gods and goddesses and a few images of the Hindu pantheon, all representing the Pāla school of art at its best, found at the famous

MUSEUMS

Buddhist centre of Nālandā. The late Gupta period is represented by a few stucco heads. Inscriptions of the time of Yaśovarmadeva of the eighth and of Vipulaśrīmītra of the twelfth century, sealings of royalties of the Gupta and Maukhari dynasties and numerous official sealings of the Nālandā monastery are some of the interesting features of this Museum. Some antiquities from Rajgir are exhibited here.

ARCHAEOLOGICAL MUSEUM, SANCHI (1919).—An Aśokan lion-capital, fragments of gateway and railings, monastic and household utensils of iron, copper and bronze and also casts of a few relic-caskets, besides a number of carvings from the Mauryan to the medieval times, form the important antiquities here.

ARCHAEOLOGICAL MUSEUM, SARNATH (1904).—Antiquities in this Museum represent the works of art of the Maurya, Śuṅga, Kushan, Gupta and medieval periods. The place of pride is occupied by the 2-m. high lion-capital of Aśoka (pl. LXXXIII). A colossal standing Bodhisattva of the Mathura school belonging to the reign of Kanishka, some prize-pieces of Gupta and later art, like the images of Buddha (pl. LXXXVIII), the Bodhisattvas, etc., all in Chunar sandstone, are on view here.

ṬĪPŪ SULTAN MUSEUM, SERINGAPATAM (1959).—Objects connected with the history of Haidar 'Alī and ṬĪpū Sultan and their contemporary history are housed in ṬĪpū's summer-place of Dariyā-Daulat-Bāgh.

D. MUSEUMS UNDER CORPORATE OR CIVIC BODIES

ALLAHABAD MUSEUM, ALLAHABAD (1931).—Several pieces of the Bharhut railing, fragments from the Śiva temple of Bhumara, sculptures from Khajuraho, Kauśāmbī and Mathura and also some of Gandhāra school form the bulk of the sculpture-collection. Its terracotta

IMPORTANT MUSEUMS

collection, mainly from Kauśāmbī and Jhusi, is very important. Several remarkable issues of the Kauśāmbī rulers are to be seen in the coin-cabinet. There are also excellent examples of Indo-Persian, Mughal and Rajput paintings : the Mughal ones include some choicest pieces of the time of Akbar and Jahāngīr. The Pahari school is represented by a few fine paintings from Guler and Basohli.

PRINCE OF WALES MUSEUM OF WESTERN INDIA, BOMBAY (1921).—The fine collection of early sculptures of the Museum comprises examples of Gandhāra and Amaravati art, terracottas from Mirpurkhas in Sind and sculptures of Chālukyan and Rāshtrakūṭa periods. Its rich numismatic collection is well-known and the inscriptions in possession of the Museum range in date from the Aśokan to the medieval period. The copper-plate grants of the Valabhī dynasty of Kathiawar form an important group. Recently an Aśokan inscription in Kharoshthī engraved on a bowl has been acquired by the Museum. The pre-historic and proto-historic collections include exhibits like Early Stone Age implements from Cuddapah and neoliths from Amaravati, Perumbair and Banda District. The non-Indian section of the Museum is highly interesting. The collection of Indian miniature paintings in the Art Section is also particularly rich.

VICTORIA AND ALBERT MUSEUM, BOMBAY (1850).—It is mainly an industrial and agricultural museum, but there is a good collection of eighteenth-century paintings of *nava-grahas* and *ashta-dikpālas*, a small collection of paintings of the Mughal, Rajput and other schools, *rāga-mālā* paintings of the Jaipur school and Persian and Jaina manuscripts.

VICTORIA MEMORIAL HALL MUSEUM, CALCUTTA (1906).—The collection is representative of the different phases of Indo-British history. There are busts, statues

MUSEUMS

and imposing paintings of British kings and queens, Warren Hastings, Cornwallis, Wellesley, Dalhousie, etc., and also portraits of Rudyard Kipling, Burke and Macaulay. The piano and the writing-desk of Queen Victoria are in this Museum.

E. MUSEUMS OF LEARNED SOCIETIES

ASIATIC SOCIETY MUSEUM, CALCUTTA (1784).—The Society still possesses a precious and select collection of oil-paintings, besides stone and copper-plate inscriptions, ranging from the third century B.C. to the eighteenth century A.D. The Bairat rock-edict of Aśoka is exhibited here.

BANGIYA SAHITYA PARISHAD MUSEUM, CALCUTTA (1910).—It has several old manuscripts and valuable sculptures and bronzes of the Pāla school. Articles used by literary celebrities form an interesting collection of the Museum.

KANNADA RESEARCH INSTITUTE MUSEUM, DHARWAR(1910).—A large collection of Buddhist, Brāhmanical and Jaina images in stone and metal, inscriptions from Karnatak, coins and manuscripts form the important attraction of this Museum.

BHARATIYA ITIHASA SAMSODHAK MANDAL MUSEUM, POONA (1910).—The Museum has a notably large collection of documents and manuscripts, besides coins and paintings, all of historical and cultural importance, particularly to Maratha history. The excavated material from Karad, North Satara, and surface-finds from Nasik are housed here.

F. UNIVERSITY MUSEUMS

KAUŚĀMBĪ MUSEUM, UNIVERSITY OF ALLAHABAD, ALLAHABAD (1952).—Antiquities excavated at Kauśāmbī since 1949 are housed here. It has some inscriptions, coins and a large collection of sculptures.

IMPORTANT MUSEUMS

DEPARTMENT OF ARCHAEOLOGY MUSEUM, MAHARAJA SAYAJIRAO UNIVERSITY, BARODA (1950).—The exhibits represent the result of explorations and excavations conducted by the Department in the Gujarat area and the Narmada valley.

ASUTOSH MUSEUM OF INDIAN ART, UNIVERSITY OF CALCUTTA, CALCUTTA (1937).—Some of the material recovered in excavations at sites like Paharpur, Mahasthangarh, Baigram and Rangamati and the full collection of antiquities from Bangarh and Chandraketugarh are to be seen in the Museum. It has a large and varied collection of sculptures too of the Pāla period, besides terracottas from early sites in West Bengal, Mathura and other places, bronzes, coins, miniatures from Nepal, palm-leaf manuscripts, inscriptions and wooden objects.

DECCAN COLLEGE POST-GRADUATE AND RESEARCH INSTITUTE MUSEUM, POONA (1939).—The Archaeological Museum was built up with the objects excavated by the Institute in Gujarat, the Deccan, Karnatak, Andhra Pradesh and Madhya Pradesh since 1941. It contains tools, skeletons and fossils of the Stone Ages. The excavated material from Navdatoli, Maheswar, Jorwe, Nasik, Nevasa, Ahar, etc., are exhibited here.

BHARAT KALA BHAVAN, HINDU UNIVERSITY, VARANASI (1950).—The Museum was originally a private collection, transferred to the University in 1950. The museum-collection covers Indian paintings, textiles, jewellery, coins, manuscripts, etc. Some outstanding examples of Indian art (pl. LXXXVI A) are to be seen here.

4. ACKNOWLEDGEMENTS

The writer has largely drawn material of this chapter mainly from S.F. Markham and H. Hargreaves'

MUSEUMS

The Museums of India (London, 1939), K.N. Puri's, 'Archaeological Museums' in *Archaeology in India* (Delhi, 1950), A. Ghosh's article entitled, 'Fifty years of the Archaeological Survey of India', *Ancient India*, no. 9 (1953), and C. Sivaramurti's *Directory of Museums in India* (Delhi, 1959). The writer's thanks are due to these pioneers, some of whom are still intimately associated with the development of archaeological museums in India. Acknowledgments are due also to the authorities of some Museums for permission to publish photographs, respectively illustrated on pls. LXXXVI C, LXXXIX and XCI A (National Museum, New Delhi), XC and XCVI (Government Museum, Madras), XCII B (Patna Museum), LXXXVI A (Bharat Kala Bhavan, Varanasi), XCI A (Archaeological Museum, Gwalior), XCII A (Baroda Museum and Art-gallery, Baroda) and XCV (Art-gallery, Thanjavur).

H. SARKAR

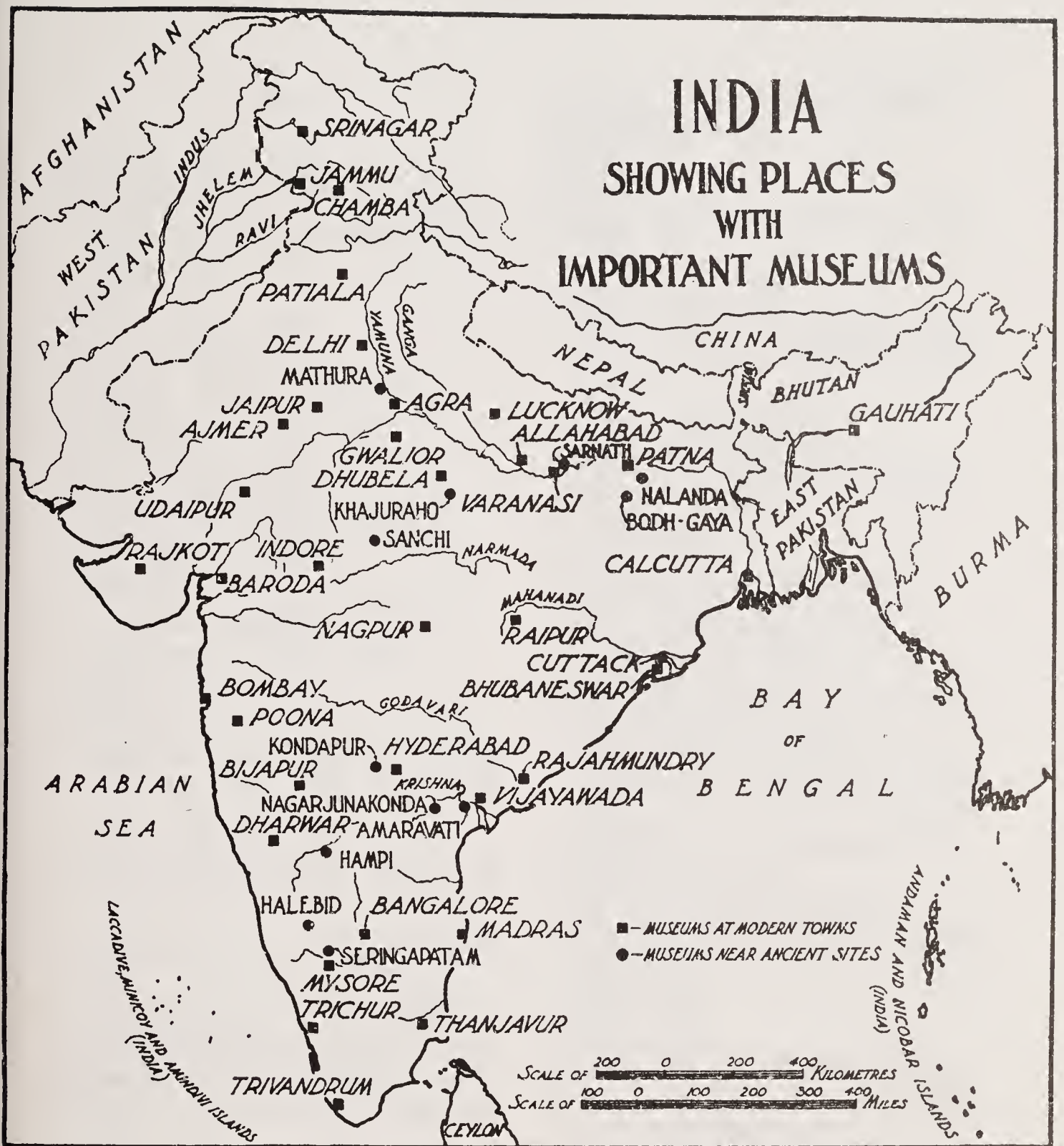


FIG 6

INDEX¹

A

- Abaneri 167, 343.
 'Abdullāh Qutb Shāh 292.
 'Abdu'r-Rahīm Khān-i-Khānan 294, 315, 324.
 Abu 171.
 Abu Simbel 226.
 Achyu, Achyuta 51.
 Adham Khān 278, 311.
 'Ādilābād 254.
 'Ādil Shāh 294.
 Ādil Shāhī 288.
 Ādīna-Masjid 266, 272.
 Ādinātha 178.
 Ādivarāha 51, 145.
 Advī-Somanapalle 139.
 Afghanistan 252, 324.
 Afzal Khān 322.
 Āghāṭa 18.
 Agra 260, 262, 298, 299, 306-08, 312-14, 316, 317, 319, 322, 323, 334.
 Ahar 17-19, 21, 351.
 Ahichchhatrā 10, 45, 50, 52, 58, 341.
 Ahmedabad 27, 182, 273, 275-78.
 Ahmednagar 75, 284, 288.
 Ahmad Shāh 271, 273-75, 283.
 Ahmad Shāh Durrāni 324.
 Aihole 133, 139, 161, 162, 192, 193, 341.
 Airakiṇa 46, 70, 71.
 Airāvateśvara 221, 233-35.
 Ajanta 113, 115, 118, 123-26, 343.
 Ajātaśatru 60-62.
 Ajay 33.
 Ājīvika 111.
 Ajmer 247, 249, 273, 312, 334, 341.
 Ajmerī gate 319.
 Akbar 59, 93, 259, 264, 272, 278, 293, 295, 306-316, 327, 349.
 Akbarī-Maḥal 307.
 Akbar Shāh II 320.
 Akkanna-Madanna 129, 138.
 Akkasalai 223.
 Akota 341.
 'Ālā'ī Darwāza 251, 252.
 'Ālam Shāh 259, 306.
 Alamgirpur 7, 10, 15, 17.
 Alampur 161, 163.
 'Alāu'd-Dīn 250, 251, 252, 255, 271, 272, 278, 283.
 'Alāu'd-Dīn Aḥmad Bahmanī 287.
 'Alāu'd-Dīn 'Ali Shāh 266.
 'Alīf Khān 275.
 'Alī 'Adil Shāh I 289.
 Allahabad 53, 87, 96, 312, 348, 350.
 Alluru 101.
 Almora 165.
 Altekar, A.S., 63, 66, 89.
 Amaravati 36, 47, 101, 104, 338, 343, 346, 349.
 Amarkantak 172, 173.
 Ambala 48, 87, 255.

¹ Prepared by Shri O. P. Tandon, assisted by Shri K. M. Srivastava and Shri K. N. Dikshit.

INDEX

Ambarnath 176.
 Amber 306, 310, 312, 327, 343.
 Ambikā-mātā 169, 180.
 Ami 14.
 Amīr Barīd 288.
 Amirthamangalam 38.
 Amman shrine 232-35, 238.
 Amraoti 26.
 Amri 5, 340.
 Amrol 164.
 Anaimalai 146, 147.
 Anangpāl 248.
 Ananta-gumphā 123.
 Anantapur 236.
 Anantaśāyanaguḍi 129, 138.
 Anantaśāyī 131.
 Andhakāntaka 168.
 Āndhra 34, 47, 75, 76, 100, 104,
 119, 138, 203, 236, 351.
 Andhra Historical Research
 Society 334.
 Anjar 180.
 Aparājitavarman (misprinted
 Aparājitarāman) 222.
 Arab 242, 263, 284, 343, 346.
 Arabian Sea 27.
 Aravallis 3, 4, 18, 39.
 Ardochsho 64.
 Arezzo (Arretium) 84.
 Aṛhāi-Din-kā-Jhonprā 247,
 249, 273.
 Arikamedu 47, 82, 83.
 Arjuna 53, 143, 148, 149, 150.
 Ārogya-vihāra 65.
 Arugolanu 101.
 Aruṇāchaleśvara 227.
 Aryans 3, 7, 11, 12, 21.
 Āsafu'd-Daula 325.
 Asawal 273.
 Ashrafī-Maḥal 280, 281.
ashṭa-dikpālas 349.
ashṭa-parivāras 152, 154, 228.
 Asiatic Society 331, 332, 350.
 Asoda 183.

Aśoka, Aśokan 2, 47, 50, 63,
 66, 81, 86-90 92, 94, 101,
 109, 110, 117, 118, 120, 141,
 255, 331, 340, 348-50.
 Assam 335.
 Asutosh Museum 335, 351.
 Ataga Khān 311, 312, 315.
 Aṭāla-Masjid 270, 271.
 'Alāwal Khān 299.
 'Alī Barīd 288.
 Atiraṇachaṇḍa 143.
 Atlantic 38.
 Atranjikhhera 10, 11.
 Aurangabad 113, 114, 117, 129,
 138, 323.
 Aurangzeb 284, 289, 297, 321-
 24, 340.
 Austin de Bordeaux 320.
 Avanti 2, 44, 46, 68, 72.
 Awra 22.
āyaka 102, 103, 105, 106.

B

Bābur 261, 262, 297-99, 327.
 Babylonion 346.
 Bacchanalian 341.
 Bādāl-Maḥal 283.
 Badami 132, 133, 139, 141, 161,
 194, 197, 199.
 Badarpur 253.
 Badoh 342.
 Bādshāhī-Darwāza 311.
 Bādshāhi Qal'a 294.
 Bādshāh-kā-Takht 266.
 Bagh 123, 126, 127, 342.
 Bahadarabad 12.
 Bahādur Shāh 272.
 Bahādur Shāh II 321.
 Bahal 21, 23, 24, 34, 35.
 Bahman Shāh 284, 285.
 Bahmanī 283-88 291, 293, 343.
 Bahraich 14, 96.
 Bahrein 30.

INDEX

- Baigram 351.
 Bāī Harir 278.
 Bairat 91, 343, 350.
 Bajpai, K.D., 70.
 Bakhtyār Khaljī 264.
 Baladeva 226.
 Baland-Darwāza 311.
 Balarāma 170.
 Balban 53, 250.
 Balfour, Edward Green, 332
 Balkh 262.
 Ballāla II 210.
 Balsane 176.
 Bānantigūdi 197, 198.
 Banaras 57.
 Bāṇas 227.
 Banas-Kantha 171.
 Banas (river) 4, 18, 19.
 Banda 349.
 Banerjee, N.R., 68.
 Bangarh 47, 78, 351.
 Bangiya Sahitya Parishad 334,
 350.
 Bangalore 38, 333, 341.
 Bankura 189.
 Bara 9.
 Barabar 110, 111, 118, 120.
 Barā-Gumbad 260, 261, 305.
 Baranagar 189.
 Bārapula 313.
 Barā-Sonā 268.
 Bārbak Shāh 267.
 Bareilly 50.
 Barīd Shāhī 288.
 Barmer 171.
 Barnala 343.
 Baroda 341, 350.
 Barwasagar 165.
 Basarh 66.
 Basohli 349.
 Batesara 164.
 Basti 88.
 bastions 14, 55, 294, 252, 301
 304, 307, 308, 319.
 Batwa 277.
 Bāz Bahādur 278, 280, 282.
 Beas 7.
 Bedsa 113, 115.
 Bellary 35, 236.
 Belur 210-12, 341.
 Bengal 189, 242, 264-67, 277,
 299, 327, 351.
 Berachampa 80.
 Berar 284, 288.
 Besnagar 342.
 Betwa 22, 70.
 Bhadar 30, 32.
 Bhadeśvara 180.
 Bhagalpur 155.
Bhagvad-Gītā 75.
 Bhagnagar 291.
 Bhairavakonda 139.
 Bhaja 113, 114, 119.
 Bhaktavatsala 222.
 Bhanasara 179.
 Bharata 230.
 Bharatiya Itihasa Samshodhak
 Mandal 334, 350.
 Bharat Kala Bhavan 351.
 Bharhut 116, 340, 346, 348.
 Bhāskaravaraman 342.
 Bhattiprolu 101-103, 105.
 Bheraghat 173.
 Bhīma 26, 148-50.
 Bhīmadeva I 180, 183.
 Bhimnath 179.
 Bhaunagar 179, 184.
 Bhita 346.
 Bhitargaon 159, 160.
 Bhoga-Nandiśvara 227.
 Bhogave 27, 30.
 Bhojaśāla 279.
 Bhubaneswar 81, 184, 186, 187,
 343.
 Bhuli-Bhaṭiyāri-kā-Maḥal
 255.
 Bhumara 159, 350.
 Bibi Achūt Kūki 277.

INDEX

- Bībī-kā-Maqbara 323.
 Bībī-kī-Masjid 294.
 Bībī Rājā 271.
 Biccavolu 203.
 Bidar 283-88, 292.
 Bihar 66, 86, 110, 113, 120, 242, 269, 299, 347.
 Bijapur 132, 133, 161, 193, 284, 288-91, 348.
 Bijnor 11.
 Bikaner 327.
 Bileswar 179.
 Bimbisāra 60, 61.
 Bina 22, 70.
 Bīrbal 310.
 Bisauli 11.
 Bishnupur 189.
 Bloch, T., 66.
 Bodhan 284.
 Bodh-Gaya 85, 93, 160, 338, 348.
 Bodhisattvas 128, 350.
 Bokardhan 129, 138.
 Bombay 22, 72, 114, 136, 137, 332, 335, 351.
 Borobudur 89.
 Brahmā 140, 141, 153, 168, 176, 217, 218.
 Brahmagiri 23, 26, 34, 35, 38, 47, 342.
 Brahmāvarta 4.
 Brāhmī 48, 71, 75, 80.
 Brīhadīśvara 229, 232-34, 239.
 Broach 70, 272, 273.
 bronze implements 5, 28.
 Budaun 11, 51, 254, 259.
 Buddha, Buddhism 2, 14, 46, 53, 56, 59, 60, 66, 67, 85-89, 91-98, 101, 105-08, 113, 116, 124-29, 158, 342, 350.
 Buddhist, 47, 54, 56, 60, 65, 66, 72, 81, 85-87, 90, 92, 93, 95-98, 100, 108, 118, 123, 126, 128, 129, 134, 138, 148, 160, 192, 243, 295, 345, 347, 348, 350.
 Buddhist Council 60, 62, 65, 95.
 Buhlul Lodī 259, 260, 269, 299.
 Bulandibagh 63, 65, 66.
 Bundelkhand 242.
 Burdwan 33.
 Burhanpur 293, 294, 317.
 burials 20, 24, 26, 30, 33-38, 40, 41, 59, 62, 87, 88.
 Burke 352.
 Burzahom 39, 41.
 Buxar 346.
- ### C
- Calcutta 78, 331, 334, 336, 338, 340, 351-53.
 Cambay 272-74.
 Carbon-14 dates 6, 9, 19, 22, 23, 25-27, 30, 33, 36, 41,
 Caucasia 11.
 chalcolithic 4, 22-26, 32, 35, 36, 39.
 Chālukya, Chālukyan 127, 132-136, 138-41, 146, 147, 161, 171, 192, 194, 196, 199, 200, 201, 203-06, 208, 209, 213, 222, 224, 225, 235, 236, 238, 346, 351.
 Chamba 343.
 Chambal 4, 17, 18, 22, 68.
 Chāmkān 268.
 Chāmkātī 268.
 Champaner 276-78.
 Champaran 86-88.
 Chāmtisiri 106.
 Chāmuṇḍa 168, 185.
 Chandellās 172, 176.
 Chanderi 283.
 Chaṇḍesa 223.
 Chaṇḍikeśvara 140, 231, 235.
 Chānd-Minār 287.

INDEX

Chandoli 26.
 Chandra 168, 248.
 Chandragiri 225, 236, 327.
 Chandragupta 49, 63, 131.
 Chandragupta II 130, 248.
 Chandraketugarh 47, 79, 80, 353.
 Chandraprabha 16.
 Chandravalli 342.
 Chandrasekhara 204.
 Chandrehi 172, 173.
 Chār-Bānglā 189.
 Chār-Minār 292.
 Charsada 341.
 Chashtana 345.
 Chaturbhujā 178.
chaturmukha 135, 137, 138, 155, 166.
 Chauhān 242.
 Chaukhaṇḍī 93.
 Chaumukhā 172.
 Chaunsaṭh-Khambā 315.
 Chausaṭh-Yoginī 173, 176.
 Chāvunḍarāya 225, 226.
 Chejarla 101, 192, 196.
 Chenna-Keśava 210.
 Chhatar-Manzil 325.
 Chhatarpur 176.
chhatrīs 244, 258, 259, 261.
 Chhoṭā-Kailāsa 152.
 Chhoṭā-Sonā 268.
 Chīdamaram 235.
 Childe, Gordon 30.
 China 77.
 Chinese 53, 60, 77, 84, 94, 95.
 Chingleput 37, 38, 141, 143, 215, 221, 222.
 Chīnī-kā-Rauza 322.
 Chinna-Ganjam 101.
 Chiragh-Delhi 256, 260.
 Chirand 15, 17.
 Chishtī Khān 283.
 Chitaldrug 34, 38.
 Chitor 172, 176, 236, 281.

Chitorgarh 168.
 Chitrugupta 178.
 Chittoor 237.
 Chod 26.
 Choḷa 84, 108, 146, 191, 208, 223, 224, 228, 230, 232-37, 342, 345.
 Christian 58, 71, 78, 104, 122.
 Chūdāmaṇivarma 108.
 Chuṇar 87, 113, 350.
 Claude, Hastin 325.
 clay bullae 82.
 Cochin 347.
 coins 45, 47-52, 55, 57, 58, 64, 67, 69, 70, 73, 75-77, 80, 82, 84, 96, 341, 349, 351, 352.
 Colgong 155.
 Copper Hoard 11-13, 29, 340.
 Corinthian 325.
 Cornwallis 352.
 Cuddapah 351.
 Cunningham 50, 330, 332.
 Curzon 333, 334.
 Cuttack 97, 336.

D

Daimabad (misprinted Diama-
 bad) 25.
 Dākhil-Darwāza 267.
 Dakṣiṇāmūrti 153, 225.
 Dalavanur 141.
 Dalhousie 352.
 Damoh 172.
 Danavulapadu 345.
 Dantivarman 221.
 Darasbārī 268, 277.
 Darasuram 233.
 Darius 2.
 Darya-Daulat-Bāgh 326, 350.
 Daryā Khān 276.
 Daśaratha 110, 141.
 Daśavatāra 134, 159.
 Datia 327.

INDEX

- Dā'ūd Shāh 264.
 Daulatabad 254, 283, 284, 287.
 Daulat Khān Lodī 257, 261.
 Debalpur 252.
 Deccan College Post-graduate
 and Research Institute 72,
 74, 75, 353.
 Delhi 77, 242, 246, 247, 250-60,
 262-65, 269, 271-73, 279,
 283-85, 298-304, 306, 307,
 311-13, 315, 317-23, 325, 331,
 334, 348.
 Delmal 182.
 Deogarh 159.
 Deoria 93.
 Deshpande, M.N., 77.
 Devadatta 86.
 Devagiri 254.
 Devapāla 345.
 Devī 230, 233, 343.
 Devīkoṭa 47.
 Devnimori 98.
 Dewas 175.
 Dhamekh 92.
 Dhamnar 153, 154.
 Dhar 123, 279, 280.
dharma-chakra 58, 91, 117.
 Dharmarāja-ratha 148-50, 220,
 240.
 Dharmarāja-maṇḍapam 143.
 Dharmarājikā 92.
 Dharwar 352.
 Dhauri 81.
 Dhanakataka 36.
 Dhinoj 182.
 Dholka 272, 273, 275.
 Dhruvadatta 57.
 Dhubela 343.
 Dhulia 176.
 Diamabad (see Daimabad) 25.
 Didarganj 346.
 Dikshit, K.N., 50.
 Dilwārā 171.
 Dilāwar Khān Gūhri 278, 280.
 Dinajpur 78.
 Dīn-i-Ilāhi 306.
 Dīnpanāh 301, 304.
 Dīwān-i-Ām 309, 316, 317, 319,
 320.
 Dīwān-i-Khāss 309, 316, 317,
 320.
 dockyard 30.
 dolmen, dolmenoid 37, 38, 215.
 Draupadī-ratha 148-51, 240.
 Draviḍa 39.
 Drishadvatī 3, 5, 6.
 Dūlādeo 178.
 Durgā 137, 139, 150, 162, 195,
 196, 201, 202.
- ### E
- Eastern Ghats 47.
 East India Company 332.
 East Khandesh 23.
 Egmore 332.
 Egypt 226.
 Ekaliṅgajī 170.
 Ekāmranātha 237.
 Eklākhī 267.
 Elephanta 135-37.
 Ellora 124, 126, 128, 134, 151,
 153, 200, 344.
 Eran 22, 46, 70, 159.
- ### F
- Fa-Hien 53, 60, 77.
 faience 5, 8, 21, 33, 76.
 Faizī 310.
 Fakhru'd-Dīn Mubārak Shāh
 266.
 Farukhabad 86.
 Farūqī 293.
 Fatehabad 254.
 Fateh Khān 268.
 Fatehūrī Begam 322.
 Fatehpūrī Mosque 322.

INDEX

- Fatehpur-Sikri 39, 308-11.
 Fergusson 309.
 fertility 48, 346.
 Fīrūzābād 255.
 Fīrūz-Minār 268.
 Firuzpur 254.
 Fīrūz Shāh Tughluq 248, 249,
 254-57, 264, 268, 270, 271,
 285, 293, 331.
 Foote, Bruce 345.
 forts and fortifications 44, 51,
 54, 55, 60, 61, 96, 97, 176,
 196, 249, 269, 285, 286, 288,
 292, 298, 299, 307, 308, 312,
 314-19, 326.
 France 331.
- G**
- Gadag 207, 208.
 Gagan-Maḥal 289.
 Gaja-Lakshmī 71.
Gajendra-moksha 159.
 Galaganātha 162.
 Gaṇapati 201.
 Gandhāra 341, 346, 350.
 Gaṇeśa 137, 140, 146, 149, 150,
 164, 168, 180, 185, 187, 202,
 232.
 Gaṇeśa-gumphā 122.
 Gaṇeśa-leṇā 135.
 Gaṅga (dynasty) 226, 227.
 Gaṅgā (river) 6, 10-13, 16, 17,
 29, 36, 45, 52, 57, 63, 78,
 124, 131, 155, 163, 232, 342.
 Gangaikondacholapuram 232.
 Gaṅgarāja 226.
 Ganga-Yamuna doāb 6, 7, 10,
 14, 17, 45.
 Garikapadu 101, 103, 105.
 Garuḍa 71, 163.
 Gaur 265, 267, 268.
 Gauhati 336, 343.
 Gautamīputra 113, 119.
- Gaya 15, 110, 120.
 Ghaggar 4, 6.
 Ghanerao 170.
 Ghantasala 101, 103, 105.
 Ghaṭeśvara 168.
 Ghāzī Malik 252.
 Ghazni 242.
 Ghiyāthu'd-Dīn 242, 252-54,
 256, 263, 282.
 Ghosh, A., 50, 62, 337, 354.
 Ghoshita, Ghoshitārāma 56, 97.
 Ghumli 180, 183.
 Ghūr 242.
 Gilund 18, 19.
 Gingee 238.
 Girivraja 95.
 Girna 23.
 Girnar 184.
 Godavari, 20, 21, 24-26, 46,
 74-76, 101, 236.
 Gol-Gumbad 290.
 Goli 101, 104, 345.
 Goliṅgeśvara 204.
 Golkonda 284, 288, 291, 292.
 Gomai 23.
 Gomati 312.
 Gommaṭeśvara 226.
 Gonda 96.
 Gop 179.
 Gopikā 111.
gopura 151-153, 196, 201, 210,
 215, 218, 219, 223, 224, 227,
 228, 231-39.
 Gorad 182.
 Gorakhpur 14.
 Gosain-Khanda 66.
 Goswami, K.G., 79.
 Govindachandra 93.
 Graeco-Roman 84.
 granary 30.
 Greek 44, 49, 56, 63, 64.
 Ḡṛidhrakūṭa 61.
 Growse, F.S., 333.
 Gudivada 101-03.

INDEX

Gujarat, 98, 113, 123, 171, 178-80, 242, 268, 271-73, 275, 276, 278, 293, 294 312, 342, 353.
 Gulbarga 283, 285-87, 292.
 Guler 351.
 Gumbaz 326.
 Gummididurru 101.
 Guna 174.
 Guṇaga Vijayāditya 203.
 Gungeria 340.
 Gunmant 268.
 Guntapalle 101, 104, 106, 116, 119, 120, 125.
 Gupta 46, 49, 51, 61, 63-65, 67, 68, 71, 78-80, 92-94, 96, 130, 131, 157-59, 161, 166, 248, 343, 346, 350.
 Gurgi 342.
 Gwalior 68, 161, 164, 165, 174, 184, 242, 312, 326, 343.
 Gwyer, Sir Maurice 337.
 Gyaspur 166.

H

Haft-Gumbad 286, 287.
Haft-Manzil 281.
 Haibat Khān 274.
 Haidar 'Alī 326, 350.
 Hājīpūr 277.
 Hakra 7.
 Halebid 210, 211, 338, 342, 348.
 Hamīda Bānū 305.
 Hammam 321.
 Hampi 236, 237, 327, 338, 348.
 Hanamkonda 213.
 Hanumān 310.
 Harappa, Harappan 3-14, 27-32, 43, 48, 49, 340-42.
 Hardwar 12.
 Hargreaves 330, 334, 336, 337, 353.
 Hari-Hara 139, 168.
 Harishchandra-nī-Chori 179.

Harishena 59.
 Hārītī 56.
 harpoon 11, 12, 40.
 Harsha 94.
 Harshadmātā 179.
 Harshatmātā 167.
 Ḥasan Khān 299.
 Hastināpura 6, 7, 10-13, 45, 52, 53, 58.
 Hastings, Warren 352.
 Hāthigumphā 81.
 Hathinia 16.
 Hauz-i-'Alāī 255.
 Ḥauz-Khāss 255, 260.
 Ḥayāt Bakhsh Bāgh 321.
 Hazāra-Rāma 238.
 Ḥazrat Nizāmu'd-Dīn Auliya 251.
 Heine-Geldern 11.
 Herat 242.
 Hilāl Qāzī 273.
 Himalayan 154, 164, 165.
Hīnayāna 106, 113, 116-18 123.
 Hindolā-Maḥal 280, 282.
 Hindon 10.
 Hingloji-mātā 183.
 Hiran-Minār 310.
 Hissar 254.
 Hiuen Tsang 53, 56, 60, 77, 92, 94, 95.
 Hooghly (river) 265.
 Hoysalas 205, 209, 210, 212, 226, 342, 348.
 Hoysalesvara 210-12.
 Huchchappayya-guḍi 162.
hujra 244.
 Humāyūn 278, 295, 298, 299, 301, 303, 305-07, 315, 318, 324.
 Hūṇa 56, 97.
 Hūṇarāja 56.
 Ḥusain Shāh 269.
 Ḥūshang Shāh 279-81, 293.
 Huvishka 64, 82.

INDEX

Hyderabad 284, 291, 292, 338, 341, 344.

I

Ibrāhīm (Lodī) 259, 261, 262, 297.
 Ibrāhīm 'Ādil Shāhā 288, 289.
 Ibrāhīm Khān 298, 300.
 Ibrāhīm Rauza 289.
 Ibrāhīm Shāh 269, 270.
 Idar 342.
 Ikkeri 238.
 Ikshvāku 106.
 Iltutmish 248-50, 278.
 Imād Shāhī 288.
Imām 244.
 Imāmbārā 325.
 Indian Archipelago 77.
 Indian Museum 332, 338, 340.
 Indo-Bactrian 347.
 Indo-Corinthian 98.
 Indo-Greek 49.
 Indo-Islamic 243, 244, 284, 299.
 Indore 344.
 Indo-Roman 84.
 Indo-Sassanians 71.
 Indo-Scythian 347.
 Indragiri 226.
 Indraprastha 301.
 Indus 6, 7, 28, 32, 299, 342.
 Indus script 5, 8.
 inscription 47, 56, 71, 81, 88, 92, 93, 111, 113, 118, 119, 126, 131, 132, 140, 141, 147, 194, 196, 208, 220, 248, 252, 261, 265, 289, 298, 301, 302, 322, 341-44, 346, 348, 350, 351.
 Iran, Iranian 11, 19, 21.
 Iraq 6.
 Iravātaneśvara 221.
 Irukkuvel 235.
 'Isā Khān 303.
 Isila 47.

Islam, Islamic 243-45, 251, 252, 264-66, 272, 273, 276, 279, 284, 297, 306, 307, 326, 327.

Islām Shāh 59, 303.

Itākholā 80.

I'timādu'd-Daula 314.

I-tsing 77, 95.

Ittagi 208.

J

Jabalpur 159, 173.

Jadigenhalli 38.

Jagunnātha 188.

Jagat 169, 170, 180.

Jagatsukh 164.

Jageshwar 165.

Jaggayyapeta 101, 103, 105.

Jahānārā 317, 321,

Jahāngīr 282, 308, 312-15, 341, 351.

Jahāngīrī-Maḥal 307.

Jahānpanāh 254.

Jahāz-Maḥal 280, 281.

Jaipur 39, 91, 167, 327, 333, 344, 351.

Jaisalmer 327.

Jalālu'd-Dīn 250.

Jalālu'd-Dīn Muḥammad Shāh 267.

Jamalgarhi 341.

Jamālī-Kamālī 298, 304.

Jamā'at-Khāna Masjid 251.

Jambūkeśvara 235.

Jambūliṅga 162.

Jāmi'-Masjid 255, 271-75, 278, 280, 281, 283, 285, 286, 289, 292, 294, 296, 298, 311, 317, 321, 323, 326.

Jammu 344.

Jamnagar 179, 180, 183.

Jamunai 15.

Jangal Maḥal 16.

Jarāi-Maṭh 165.

INDEX

Jarāsandha 60.
 Jarāsandha-kī-Baiṭhak 61.
 Jasmalnath 183.
Jātaka 91.
 Java 89.
 Jaugada 47.
 Jaunpur 254, 259, 268-71 312.
 Javāri 178.
 Jesuit 108
 Jetavana 96.
 Jhalawar 176.
 Jhalrapatan 176.
 Jhangar 341.
 Jhānjhrī-Masjid 271.
 Jhansi 159, 165.
 Jhelum 296.
 Jhodga 176.
 Jhukar 341.
 Jhusi 351.
 Jī Jī Anga 311, 315.
 Jīvaka 61.
 Jivakāmrvana 61, 96.
 Jñāneśvara 74.
 Jodh Bai 310.
 Jodhpur 167, 327.
 Jogeśvarī 135, 137.
 Jones 330, 331.
 Jorwe 19-21, 23-6, 35, 353.
 Jouveau-Dubreuil, G., 83.
 Junagadh 32, 118, 123, 179, 184,
 276.
 Jūnān Shāh 255.
 Junnar 91, 113, 116, 120.

K

Kabul 261, 313.
 Kābulī 302.
 Kābulī-Bāgh-Masjid 298.
 Kachchhapaghātas 172-174.
 Kadwaha 174.
 Kadwar 179.
 Kailāsa 151-54, 200.
 Kailāsanātha 217.

Kakanmaḍh 174.
 Kākatīya 209, 213, 291, 344.
 Kalachuri 93, 172, 344, 345.
 Kalahasti 237.
 Kāle Khān-kā-Gumbad 258.
 Kalibangan 4, 6, 8, 9.
 Kālidāsa 68.
 Kālikā-mātā 168.
 Kālī-Masjid 256.
 Kali-Nadi 11.
 Kaliṅga, Kaliṅganagara 47, 81.
 Kaliyapati 222.
 Kalsar 179.
 Kalugumalai 153, 222.
 Kalyāṇa 206.
 Kamāl Maulā 279.
 Kāmarūpa Anusandhan Samiti
 336.
 Kambadhalli 227.
 Kampahareśvara 233, 234.
 Kanara 240.
 Kanauj 93, 242.
 Kanchi, Kanchipuram 132, 215,
 217, 219, 221, 237, 240.
 Kānch-Maḥal 314.
 Kandariyā-Mahādeva 178.
 Kangra 154, 347.
 Kanheri 114, 117.
 Kanishka 56, 345, 350.
 Kankaria 278.
 Kannada 348.
 Kannada Research Institute
 Museum 352.
 Kanniyakumari 146, 236.
 Kanoda 183.
 Kanpur 159.
 Kansarguḍi 203.
 Kanuparti 101.
 Kapavaram 101.
 Karachi 332.
 Karad 352.
 Karimnagar 139.
 Karkala 193.
 Karle 113, 116, 117.

INDEX

- Karṇa 173.
 Karnal 298.
 Karnatak 352, 353.
 Kārttikeya 164, 185, 187.
 Kasara 183.
 Kashmir 39, 294, 295, 297, 312, 315, 319, 322.
 Kasia 85, 93.
 Kasrawadh 344.
 Kathiawar 351.
 Kaundinyapura 26.
 Kauśāmbī 13-15, 17, 46, 52-54, 56, 57, 64, 87, 96, 342, 346, 350, 351.
 Kaveri 35, 147, 223, 235.
 Kedāreśvara 186.
 Kerakot 180 .
 Keśava 212.
 Khairu'l-Manāzil 311.
 Khajuraho 169, 173, 176-78, 186, 341, 348, 350.
 Khālis-Mukhlis-Masjid 271.
 Khaljī 250-53, 272, 273, 279.
 Khana-Mihirer-Dhipi 80, 81.
 Khandagiri 47, 81, 121, 123.
 Khandesh 293.
 Khandosan 183.
 Khāravēla 47, 81.
 Kharoshthī 351.
 Khāss Maḥal 316.
 Khizr Khān 251, 257, 258.
 Khimeswar 179.
 Khimrana 180.
 Khusraw 315.
 Khusraw Khān 252.
 Khwāja-i-Jahān 268.
 Kinderkheda 179.
 Kipling, Rudyard, 352.
 Kiradu 170.
 Kiranur 224.
 Kīrttirāja 174.
kīrtti-toraṇa 181, 182.
 Kodavalli 101.
 Kodumbalur 235.
 Kolaba 113.
 Konarak 184, 185, 188.
 Kondane 113, 115, 119.
 Kondapur 338, 342, 349.
 Kondavite 116, 120.
 Koṇeri-maṇḍapam 141, 144.
 Konkan 240.
 Kontguḍi 193, 195.
 Koraṅganātha 229.
 Korat 24.
 Korkai 223.
 Kosala 2, 44, 96.
 Kosam 53.
 Kos-Minār 313.
 Kota 160, 176.
 Kotai 180.
 Kot-Diji 5.
 Koṭikāl-maṇḍapam 143.
 Koṭivarsha 47, 78.
 Koṭlā Fīrūz Shāh 255, 302.
 Koṭlā Mubarakpur 258, 260.
 Kotla Nihang Khan 9.
 Kottapalle 139.
 Kotturu 101.
 K.P. Jayaswal Research Institute 63, 65, 66.
 Krishna (river) 26, 30, 47, 129, 140, 345, 349.
 Krishna Deva 66, 98, 189.
 Kṛishṇadeva Rāya 237, 238.
 Kshaharātas 75.
 Kshatrapa 73, 98, 119.
 Kshatriyasimheśvara 215, 216.
 Kubera 168.
kuḍai-kals 37.
 Kūdumiyamali 146.
 Kulottuṅga III 233.
 Kulu 164.
 Kumāradevī 49, 93.
 Kumārapāla 182, 183.
 Kumbakonam 228.
 Kumbhariaji 171.
 Kumbha-śyāma 168.
 Kumrahar 63, 65.

INDEX

Kunnandarkovil 147.
 Kunnattur 38.
 Kuram 215.
 Kuranganilmuttam 142.
 Kurkihar 346.
 Kushk-Maḥal 283.
 Kuśīnagara 93.
kūṭāgāra 149.
 Kutch 180.

L

Lād Khān 162, 193, 194, 240.
 Lahore 242, 261, 263, 299, 313,
 315, 316, 322.
lakhaurī 50, 59.
 Lākheśvara 180.
 Lakkundi 207.
 Lakshmaṇa 160, 178.
 Lakshmaṇasena 264.
 Lakshmī 340.
 Lakulīśa 164, 170.
 Lal, B.B., 11, 12, 52, 81.
 Lāl-Darwāza 271, 302.
 Lālguān-Mahādeva 176.
 Lāl-Gumbad 256.
 Lāl-Koṭ 247, 248.
 Lāl Maḥal 283.
 Lāl-Qal'a 303, 319.
 Latin 84.
 Lāṭ-Masjid 279.
 Lauriya-Nandangarh 87, 88.
 Lichchhavis 66, 67, 89.
 Limboji-Mātā 182.
 Liṅgarāja 186-88.
 Lodī 256-60, 262, 279, 294,
 297-300, 305-07, 311, 312.
 Lohanipur 346.
 Lomās-rishi 111, 112, 114, 120.
 London 331, 332, 338.
 Loṭan 268.
 Lothal 13, 27-32, 38, 339.
 Louis XIV, XV, 341.
 Louvre 331.

Lucknow 325, 333, 344.
 Lumbinī 85.
 Lūna-Vasahī 171.
 Luni 4.

M

Macaulay 352.
 Machchhī-Bhawan 316.
 Madras 338, 345, 349.
 Madurai 132, 146, 222, 238,
 239, 327.
 Magadha 2, 44, 46, 60, 63, 95.
 Mahabalipuram 141, 143, 148,
 149, 203, 215, 217, 220, 221,
 240.
Mahābhārata 13, 50, 52, 60, 61.
Mahābhāshya 74.
 Mahābodhi 94, 160.
 Mahādeva 208.
mahā-janapada 45, 57, 68.
 Mahakuteshwar, Mahākūṭeś-
 vara, 161, 162, 192, 196-
 99.
 Mahasthangarh 353.
 Mahāvīra 2, 60, 66, 89, 94, 95,
 170.
 Mahāyāna 94, 97, 106, 117, 118,
 124.
 Māhem Anga 311.
 Mahendra 141-44, 146.
 Mahendravadi, 141, 142.
 Mahendravarman 141, 217.
 Mahendravarmaśvara 218, 219.
 Maheśa 136, 137.
 Maheśa-mūrti 134-36.
 Maheswar 20, 46, 72, 73, 353.
 Mahishamardinī 145.
 Māhishmatī 46, 72.
 Maḥmud I 280-83.
 Maḥmūdabād 276, 277.
 Maḥmūd Begarha 272, 276,
 277.
 Maḥmūd Gāwān 287, 288, 291.

INDEX

- Maḥmūd of Ghazni 242, 263.
 Maḥmūd Shāh 283, 287, 288.
 Maḥmūd Tughluq 257.
 Mahua 164.
 Maitraka 178-80.
 Malaiyadikurichi 147.
 Malaya 108.
 Malchā-Maḥal 255.
 Mālegiṭṭi-Śivālaya 197.
 Malik Aḥmad 293.
 Malik Mughith 280.
 Malik Sarwar 268, 269.
 Maliku'sh Sharq 268.
 Mallikārjuna 197, 199, 200, 203.
 Malwa 32, 174, 278, 279, 282, 283, 293.
 Māmalla 140, 141, 143, 144, 147, 148.
 Mamandur 141-43.
 Mamlūk 246, 247.
 Mañchapurī-gumphā 122.
 Mandagappattu 141, 142.
 Mandasor 22, 153.
 Mandu 279, 280, 283, 293.
 Maṅgaleśa 132, 141.
 Mangrol 272, 273.
 Maṇināga 61.
 Maniyār-Maṭh 61, 160.
 Manjal 180.
 Mankheda 166.
 Mān-Mandir 326.
 Manmoḍā 116.
 Manoti 22.
 Man Singh 306, 326.
 Mānyakheta 132.
 Maratha 73, 75, 77, 196, 352.
 Markham 330, 334, 336, 337, 353.
 Marshall, John, 61, 334.
 Maryam-kī-Koṭhī 310.
 Mary, Queen 320.
 Maski 35, 38, 344.
 Masarh 346.
 Masrur 154.
 Mātaṅgeśvara 176, 221.
 Mathura 46, 53, 302, 333, 342, 345, 350, 353.
mātrikās 342.
 Mattancheri 347.
 Maukhari 350.
 Maurya, Mauryan 48, 63-65, 71, 79, 80, 89-94, 96, 111, 113, 344, 346, 350.
 Mediterranean 38, 73.
 Megalith, megalithic 16, 17, 24, 26, 30, 34, 36-39, 41, 340, 347.
 Megasthenes 63, 66.
Meghadūta 68.
 Meguti 193, 194.
 Mehrauli 298, 304, 311.
 Mehsana 180-83.
 Menal 176.
 menhirs 37, 40.
 Midnapur 77.
 Mihira-Bhoja 165.
 Mihirakula 50.
 Mihtar-Maḥal 290.
mimbar 244.
 Minā-Bāzār 307, 308.
 Minā-Masjid 308.
 Mīrān Mubārak 293.
minār 244, 248, 251, 287, 292, 294, 310.
 Mirpur-Khas 98, 351.
 Mirza 'Aziz Kokaltāsh, 315.
 Mirzā Ghiyāth Baig 314.
 Mirzā Haidar 295.
 Mirzapur 12, 16.
 Mishra, V.K., 63.
 Mitra 55.
 Miyān Bhoya 261.
 Miyani 179, 180, 183.
 Miyān Khān Chishti 277.
 Modhera 181, 182.
 Mogalrajapuram 139.
 Mohenjo-Daro 5, 9, 340-42.
 Mongols 250.

INDEX

Moraina 16.
 Morena 164, 174.
 Mori 319.
 Moth-kī-Masjid 261, 302, 304.
 Moti-Masjid 316, 317, 321, 323.
 Mount Abu 171.
 Mubārak 258.
 Mubārakābād 258.
 Mubārak Sayyid 277.
 Mubārak Shāh 269.
 Muchukunda 72.
 Mughals 75, 77, 93, 246, 260, 261, 272, 278, 284, 295-98, 302, 304, 305, 307, 312-15, 322, 324-26, 344-46, 351.
 Muhāfiz Khān 276.
 Muḥammad II 271.
 Muḥammadābād 276, 277.
 Muḥammad Ādil Shāh 290.
 Muḥammad Ghauth 312.
 Muḥammad Ghūrī 242, 263, 278.
 Muḥammad Khaljī 264.
 Muḥammad Shāh 259, 260, 275, 277, 285, 288.
 Muḥammad Tughluq 254, 264, 268, 283.
 Mu'īnu'd-Dīn Chishtī 312.
 Muizzu'd-Dīn Mubārak Shāh 258.
 Mujahid 286.
 Mukanda-Nayanār 220.
 Mukandwara 160.
 Mukteśvara 186, 221.
 Mūlagandha-kuṭī 92.
 Multan 242, 263.
 Multanpur 277.
 Mumtaz-Maḥal 317, 318, 320.
 Muni Suvrata 60.
 Murāyat 174.
 Murshidabad 189.
 Mustafābād 276.
 Muthamman-Burj 314.

Muttaraiyar 147, 223.
 Mūvar-kovil 235.
 Muzaffarpur 66, 87, 89.
 Mysore 34, 35, 38, 209, 238, 325, 326, 333, 342.

N

Nachna 159, 166.
 Nadia (Navadvīpa) 264.
 Nādir Shāh 320, 324.
nāga 61, 67, 71, 163, 186.
 Nagapattinam 108.
 Nagarjunakonda 30, 38, 47, 101, 104-07, 127, 191, 349.
 Nagarjuni 110, 111, 118.
 Nagda 21, 22, 170.
nāga-śākhā 164, 167, 168, 173.
 Nāgeśvara 228.
nāgī 160, 186.
 Nagīna-Masjid 278, 323.
 Nagpur 37, 333, 346.
 Nahapāna 113, 119.
 Nahr-i-Bihisht 320.
 Naigameśa 64.
 Naiwal 8.
 Nakkalagudi 203.
 Nakula-Sahadeva-ratha 150.
 Nal 341.
 Nālandā 86, 94, 95, 125, 160, 334, 342, 349.
 Nalgonda 38.
 Nandangarh 89.
nandi 134-36, 140, 146, 151-53, 193, 222, 223, 225, 229, 231, 232.
 Nandi (place-name) 227.
 Nandivarman-Pallavamalla 219-21.
 Narain, A.K., 57.
 Nara-Nārāyaṇa 159.
 Narasimha 143, 147, 158, 168.
 Narasimhavarman Māmalla 143, 147.

INDEX

Narmada 20, 24, 46, 72, 283, 353.
 Narnaul 300.
 Narttamalai 147, 224.
 Nasik 24, 25, 46, 74-76, 113, 115, 116, 119, 176, 353.
 Nāsika, Nāsikya 46.
 Nāsiru'd-Dīn Maḥmūd 249, 250.
 Naṭarāja 168, 345.
 National Museum 337-39, 341.
Nāṭya-śāstra 230.
 Naubat-or Naqqār-Khāna 319.
 Naudurgā 118, 165.
nava-chauki 171.
 Navalakhā 182, 183.
 Navaliṅga 207.
 Navdatoli 14, 19-23, 27, 33, 72, 73, 353.
 Navi-Dhrewad 179.
 Nawab 325.
 Nāyakas 230, 232, 235, 238, 239.
 Nellore 139.
 Nemawar 175.
 Neminātha 184.
 neolithic 35, 36, 39-41, 78, 351.
 Nepal 87, 353.
 Nevasa 19, 25-27, 35, 75, 76, 353.
 Nichakshu 13, 53.
 Nīlakaṇṭha-Maḥādeva 182, 183.
 Nīlkanth palace 283.
 Nishāt 322.
 Nizām Shāhī 76, 288.
 Nizamuddin 256, 312, 315, 321.
 Nohta 172, 173.
 North Arcot 141, 142, 236, 237.
 Nubia 38.
 Nūr-Jahān 282, 314, 315, 341.
 Nūr-Maḥal 313.
 Nusrat Shāh 257.

O

Olakkanneśvara 221.
 Orchha 327.

Orissa 97, 100, 121, 184-86, 188, 336, 343.
 Orissan 155, 185, 186, 188.
 Orpheus 320.
 Osian 167, 168.
 Oudh 269, 325.

P

Padma 78.
 Paharpur 89, 353.
 Pakistan 5, 6, 11, 98, 262.
 Pāla 78-81, 94, 95, 346, 348, 349, 352, 353.
 Palam 298.
 Palampet 213.
 Pāli 53, 170, 172.
 palisade 63, 66.
 Pallava 108, 132, 140, 141, 145-48, 153, 154, 192, 200, 203, 204, 214, 217, 219, 220, 222, 223, 225, 226, 228, 230, 233-37, 240.
 Pallāvaram 141, 142.
 Pampāpati 237, 238.
 Panamaḥai 215, 217, 218.
 Pañchāla 50, 51.
 Pañcha-Pāṇḍava 145.
pañchāyatana 159, 167.
 Panch-Maḥal 309.
 Pāṇḍava 13, 53, 60, 301.
 Pandu 33.
 Pandua 265-67.
 Pāṇḍu-leṇa 113, 115, 116.
 Pandu-Rajar-Dhibi 33.
 Pāṇḍya, Pāṇḍyan 132, 145, 147, 153, 191, 222-25, 228, 229, 233, 235, 236.
 Panipat 262, 298.
 Panna 159, 166.
 Pāpanātha 163.
 Paramāra 70, 172, 174-76, 279.
 Parameśvaravarman 144, 214, 215.

INDEX

Parāntaka I 229.
 Paraśurāma 170.
 Paraśurāmeśvara 184, 185.
pāribhogika 87.
 Pārśvanātha 178.
 Pārvati 159, 164, 168, 187.
 Patadkal 161, 162, 193, 199, 204, 207.
 Pāṭaliputra 46, 63, 346.
 Patan 272.
 Patañjali 74.
 Patiala 346.
 Patna 46, 48, 60, 63, 95, 160, 340, 345.
 Pāṭṭābhirāma 238.
 Patthar-Masjid 315.
 Pawaya 161, 343.
 Peacock Throne 320.
 Pedda-Ganjam 101, 103, 105.
 Peddamāddur 101.
 Penamaga 139.
 Pennair 100.
 Pennsylvania 22.
 Penukonda 236.
Periplus of the Erythraean Sea 46, 70, 84.
 Persepolitan, 65, 115-17.
 Persia, Persian 275, 284-87, 305, 307, 312, 314, 316, 318, 320, 324, 342, 344, 348, 351.
 Persian Gulf 30.
 Perumbiar 345, 351.
 Peshawar 342.
 Petlad 272.
 Piḍāri-ratha 149-51.
piḍhā-deul 185.
piḍhā-munḍis 187.
pietra dura 319, 320.
 Piggott, Stuart, 11.
 Piklihal 35.
 Piludra 183.
 Pindara 179.
 Pippala 61.
 Piprahwa 2, 88, 89, 341.

Piranmalai 146.
 Piravātaneśvara 221.
 Pir-Ghaib 255.
 Pitalkhora 113, 115, 119.
 Poduke 84.
 Pondicherry 83.
 Pondugala 203.
 Poona 72, 73-5, 113, 334, 353.
 Porkalam 38.
 Prabhas Patan 32, 179, 180, 182, 183.
 Pradyota 68.
 Prahladpur 15, 17.
 Prakash 21, 23, 24.
 Pratāparudra 213.
 Pratīhāra 164, 165.
 Pravara 20, 24, 25, 75.
 prehistoric 72, 342, 343, 351.
 Prince of Wales Museum 335, 351.
 Prithvirāja 242.
 Proto-Australoid 12.
 protohistoric 1, 43, 45, 46, 53, 69, 71, 73, 75, 344, 351.
 Ptolemy 47, 77.
 Pulipudar-maṇḍapam 141.
 Punarbhava 78.
 punch-marked 48, 52, 64, 67, 71, 76, 77, 80, 82, 96.
 Purānā-Qal'a 301, 302, 304, 312.
 Purāṇic 13.
 Puri, K.N., 354.
 Puri 121, 184, 188.
 Puri-Kushan 82.
 Puvalaikudi 147.

Q

Qadam-Rasūl 268.
 Qal'a-i-Kuhna-Masjid 302.
 Qal'a-Rāi Pithora 247, 254.
 Qaranful 269.
 Qasim Barīd 287.

INDEX

quibla 244.
 Quilon 146.
 Qulī Qutb Shāh 291, 292.
 Quran, Quranic 252, 261, 301.
 Qutb 248-51, 254, 265.
 Qutb-i-‘Ālam 277.
 Qutbu’-d-Dīn Aḥmad Shāh 275.
 Qutbu’-d-Dīn Aibak 242, 246-50.
 Qutbu’-d-Dīn Mubarak Shāh 252.
 Qutb Shāhī 288, 291, 292.
 Quwwatu’l-Islām 247-49, 251, 273.

R

Rāchamalla Satyavākya 226.
rāga-mālā 351.
 Raichur 35, 36, 38, 344.
 railing 88, 90, 92, 94, 102-06
 114, 117, 121, 347, 350.
 Raipur 160, 333, 346, 347 (mis-
 printed Laipur).
 Rairh 344.
 Rājagṛiha 46, 60, 62, 63, 86, 95.
 Rajahmundry 334.
 Rājarāja I, II 108, 223, 229,
 232, 233.
 Rājarāja Narendra 204.
 Rājarājeśvara 204, 229, 233.
 Rājārāṇī 186.
 Rājasimha 143, 215, 217, 223.
 Rājasimheśvara 215, 217.
 Rajasthan 3-7, 9, 17-19, 28, 33,
 53, 54, 169-72, 175, 176, 180,
 181, 326, 342.
 Rājā Visāl-kā-Garh 67.
 Rājendra I 232, 233.
 Rajghat 15, 17, 46, 57.
 Rajgir 46, 60, 61, 94, 95, 112,
 160, 346, 350.
 Rajkot 32, 333.
 Rajpur-Parsu 11.
 Rajwade Samshodhan Mandal 336.

Rāma 159, 170, 310.
 Rāmagupta 71.
 Ramanathapuram 146, 239.
 Rāmānuja-maṇḍapam 145.
 Ramatirtham 101, 104, 107.
Rāmāyaṇa 66, 96, 345.
 Ramses II 226.
 Rāmeśvara 134.
 Rameswaram 239.
 Ramgarh 160, 176.
 Ramireddipalle 101.
 Ramnagar 50.
 rampart 14, 44, 51, 55, 60, 62,
 63, 67-69, 79, 83, 307,
 308.
 Rampurwa 340.
 Rāṇakdevī 180.
 Ranakpur 172.
 Rāṇā Kumbha 172, 281.
 Raṅgamati 353.
 Raṅganātha 143, 235.
 Raṅgin-Maḥal 286.
 Rangamaḥal 53.
 Rang-Maḥal 320.
 Rangpur 28, 30, 31.
 Rāni-Bhavānī 189.
 Rānī-gumphā 122.
 Rāni-kā-Hazīra 275.
 Rāni Rūpmati 278, 280, 282.
 Rānī Sipri 276.
 Rapti 14.
 Rāshtrakūṭas 125, 132, 134,
 151, 153, 204, 346, 351.
 Rasūlābād 277.
 Ratanpur 346.
rathas 143, 148-50, 155, 187.
 Ratnagiri 97, 339.
 Raushanārā 321.
 Rāvalagūḍi 133.
 Rāvaṇa 151.
 Ravi 7.
 Red Fort 319, 323.
rekḥā-deul 185,

INDEX

relic-casket 88, 89, 98.
 reservoir 61.
 Revanta 168.
 Revatimita 58.
 ring-well 58, 73.
 Roda 179.
 Rojdi 32.
 Roman, Rome 47, 48, 71, 73,
 76, 78, 82-4, 326, 346.
 Royal Asiatic Society 331, 332.
 Roy, Sita Ram 66.
 Rudra-mahālaya 182, 183.
Rudras 182.
 Rudrasena 98.
 Rudreśvara 182.
 Ruhavi 183.
 Rupar 6, 8-10, 30, 45, 48, 58,
 339.
 Rupnarayan 77.
 Russia 11.

S

Sabar-Kantha 98, 179.
 Sabarmati 27, 274.
 Safdar Jang 315, 324.
 Sagar 22, 159.
 Saharanpur 12.
 Saheth-Maheth 96, 345.
 Sahribahlol 341.
 Śaiva, Śaivite 133, 134.
 Śaka 132.
 Salarjang 338, 341.
 Salihundam 100, 108.
 Salimgarh 303, 319.
 Salīm Shāh 303.
 Saljuq 250, 263.
 Salmān Sāwji 309.
 Salsette 114.
 Saluvankuppam 143.
 Sambhal 298.
 Sambhar 344.
 Samudragupta 49, 51.

saṁvaranā 175, 181.
 Sanchi 86, 87, 90, 102, 130,
 159, 334, 350.
 Sander 180, 182.
 Saṅgameśvara 162, 199-201.
 Sangankallu 35.
saṅghārāma 119, 121.
 Sankalia H.D., 72, 74, 75.
 Sankaram 101, 108, 121, 148.
 Sāṅkāśya, Sankisa 86.
 Sanur 38.
sapta-mātrikās 146, 223, 224.
 Saptaparṇī 61.
 Śarabhapurīyas 347.
 Saran 15.
 Sarasvatī 3, 6-8.
 Sāriputra 94.
śārīrika 87.
 Sarkar, H., 354.
 Sarkhej 275, 277, 278.
 Sarnath 85, 87, 92, 93, 334, 350.
sarvatobhadra 81.
 Sasaram 299, 303.
 Śāsbahū 170, 174, 184.
Śatapatha Brāhmaṇa 55.
 Satara 352.
 Sātavāhana 47, 76, 119, 344, 349.
 Sātpula 254.
 Śatruñjaya 184.
 Sattanpudi 224.
 Saugor 70.
 Sayyid 256, 257, 259, 299, 300.
 Sayyid 'Ālam 274.
 Sayyid Uthmān 277.
 Sejakpur 182.
 Sena 78, 346.
 Sengamedu 38.
 Seringapatam 338, 350.
 Seshaśāyī 159.
 Shahabad 160.
 Shāh 'Ālam 64.
 Shahdāra 315.

INDEX

- Shahdol 172, 173.
 Shāh Hamadān 296.
 Shāh-i-‘Ālam 277.
 Shāhjahan 307, 311, 314-19,
 321-23, 341.
 Shāhjahanābād 319, 321.
 Shāh Mīrzā 294, 295.
Shāh-nāma 344.
 Shāh Nawāz Khān 294.
 Shāh Rukn-i-‘Ālam 263.
 Shāhzādī-kā-Rauza 283.
 Shaikh Aḥmad Khaṭṭū 275.
 Shaikh Farīd 272.
 Shaikh Fazlu’llāh 304.
 Shaikh Kabīru’d-Dīn Auliya
 256.
 Shaikh Salim Chishti 308, 311.
 Shālimār 322.
 Shamlaji 179.
 Sharma, G.R., 54.
 Sharma, Y.D., 48, 84, 328.
 Sharqī 269, 371.
 Sher-Maṇḍal 303.
 Sher Shāh (Sur or Suri) 278,
 299, 300-05.
 Shīsh-Gumbad 260.
 Shivpuri 165, 174.
 Shujā‘at Khān 278.
 Shujāu’d-Daula 324.
 Sialk 21.
 Siddharāja Jayasīṃha 182.
 Siddheśvara 175, 186.
 Sidhi 172.
 Sidhpur 182, 183.
 Sīdī Sa‘īd 276.
 Sikandar 259-61, 269, 295, 296,
 299, 303, 306, 318.
 Sikandara 260, 313 .
Sikandar-nāma 344.
 Sikandar Shāh 266.
 Sikandar Shāh Sūr 299, 304.
 Siṃhadeva 294.
 Singapperumalkovil 143.
 Singavaram 143.
 Singh, Raghbir 62.
 Sinnar 176.
 Siprā 68.
 Sirhind 259.
 Sīrī 251, 254, 255.
 Sirohi 169.
 Sirpur 160, 347.
 Sirsa 10.
 Sisupalgarh 47, 81.
 Sītalāmātā 183.
 Sitamarhi 110, 111.
 Sitaramapuram 139.
 Sittannavasal 147.
 Śiva 132, 133, 137-39, 141, 142,
 146, 147, 153, 158, 159,
 168, 172, 176, 180, 182, 183,
 192, 198, 213, 215-17, 222-25,
 230, 233, 345, 350.
 Śivadatta 57.
 Śivālaya 197, 199.
 (Śiva) *linga* 134 -37, 140, 143,
 146, 216, 217, 230.
 Śiva-Pārvatī 146.
 Śiva-Umā 144.
 Siwalik 8, 10.
 Siyamangalam 141, 142.
 Skanda 144, 158.
 Sohagaura 14, 15, 17.
 Sohagpur 173.
 Sola-Khamba 286.
 Solankī 171, 172, 175, 180-82,
 184, 272.
 Somnath 32, 242.
 Somanātha 183.
 Somāskanda 144-46, 150, 215-
 17, 219, 221.
 Somavamśīs 347.
 Someśvara 182, 183.
 Somnathpur 212.
 Son 63.
 Sonargaon 299.
 Sonbhandār 112.
 Son-Kansari 179.
 Sonpur 15, 17.

INDEX

Sothi 5.

South Arcot 38, 141, 143,
215.

Spooner, D.B., 65, 66.

Sravana-Belgola 225-27.

Śrāvastī 14, 15, 86, 96.

Srikakulam 100.

Srinagar 39, 296, 312, 315, 322,
347.

Srinivasanallur 229.

Srinivasan, K.R., 108, 156,
240.

Srirangam 235, 239, 336.

Śriranganathasvami 336.

Śrīvijaya 108.

Srivilliputtur 239.

Śrī Yajña 113, 119.

Stein, Aurel, 337.

Subrahmanya 147, 232, 239.

Sudāmā 111, 120.

Sudharṃma-sabhā 116.

Suhania 174.

Sultan Ghari 249, 254.

Sumugadhā 61.

Sunak 182.

Sundaravarada-perumāḷ 221.

Sundareśvara 228.

Ṣuṇṇa 47, 49, 51, 53, 68, 70,
78-80, 94, 346, 350.

Sun-god 166, 168, 182, 188.

Sun-temple 169, 176, 179, 181,
184, 188.

Supiyā 111.

Sūr 297-99, 301.

Sūraj-Kuṇḍ 254.

Surendranagar 30, 180, 182.

Sur 59.

Sutlej 6-8, 10, 48.

Sutrapada 179.

Surwaya 174.

Sūrya 164, 166, 168, 170,
213.

Swāt 294, 341.

syena-chiti 55.

T

Tāj-Maḥal 306, 314, 317, 318,
324.

Tāju'd-Dīn Fīrūz 286.

Takht-i-Bahi 341.

Takht-Maḥal 286.

Tālagiriśvara 217.

Talkad 225.

Tāmalites 47.

Tamil 100, 108, 141, 229.

Tamluk 47, 77.

Tāmraliptikā 77.

Tānka-Masjid 273.

Tāntipārā 268.

Tapti 23-5, 293, 294.

Tarai 87.

Taranga 183.

Taraori 242.

Tarapur 280.

Tartar 253, 287.

Tasbiḥ-Khāna 320.

Tata Institute of Fundamental
Research 22.

Tawa 131, 148.

Taxila 48, 86, 341.

Tejapāla 184.

Tekwada 23, 35.

Teli-kā-Mandir 165.

Tepe Hissar 19.

Ter 192, 196.

Terahi 165.

terracotta (figurines) 4, 5, 8,
16, 18, 28, 34, 47, 49, 51-53,
57-59, 63-65, 67-71, 73, 75-82,
96-98, 159, 161, 189, 342, 346,
349-51, 353.

Thākurvārā 154.

Thalmer 293.

Than 180.

Thana 176.

Thanjavur 108, 146, 224, 228,
229, 232, 233, 235, 238, 239,
340.

INDEX

theatre 44
 Thiruchchirappalli 141, 142,
 146, 147, 222-24, 228, 229,
 235.
 Tibetan 97.
 Tigawa 159.
 Tijara 306.
 Tikamgarh 166.
 Tilangānī 256, 257, 264.
 tile 64, 69, 73, 75, 77, 80,
 162, 245, 260, 263, 265, 268,
 279, 287, 292, 296, 300, 304,
 312, 314, 322.
 Tīmūr 257, 269, 279.
 Tīn Darwāza 275.
 Tipū Sultan 326, 338, 350.
 Tirhut 269.
 Tirukkalukkunram 143, 215,
 222.
 Tirukkattalai 228.
 Tirumal Nāyaka 327.
 Tirunelveli 146, 147, 153, 223.
 Tirupparankunram 146, 147.
 Tiruppur 222.
 Tiruttangal 146.
 Tiruttani 221.
 Tiruvāliśvaram 223.
 Tiruvannamalai 235, 237.
 Tiruvelangadu 345.
 Tiruvellarai 147.
 T. Narsipur 35, 38.
 Tod 118.
 Toda 111.
 Ṭodar Mal 307.
 Toli-Masjid 292.
 Tomar 248.
ṭopi-kals 37.
 Topra 255.
 Toramāna 50, 55, 56.
 Tosali 47, 81.
 Travancore 333.
 Tribeni 265, 266.
 Tribhuvanam 233.
 Trichur 38, 347.

trika-maṇḍapa 170.
 Trimūrti 148.
 Trinetreśvara 180.
 Tripurāntakeśvara 221.
 Tripurī 346.
 Trivandrum 146, 333.
 Trivikrama 168.
 Tudor 253, 269.
 Tughluq 252, 253, 257, 258,
 263, 267, 269, 271, 274, 279,
 285, 286, 294.
 Tughluqābād 253, 254.
 Tulaja-leṇa 91, 116, 120.
 Turk 284, 288, 291.
 Turkman Gate 256, 319.

U

Udaigiri 130, 148, 343.
 Udaipur 18, 168-70, 327, 333.
 Udayāditya 175.
 Udayagiri 47, 121, 122.
 Udayana 55.
 Udaypur 175.
 Udayeśvara 175.
 Udayin 63.
uddeśika 87.
 Udyanadeva 295.
 Ujjain, Ujjayinī 22, 46, 68-70
 72.
 Ulugh Khān 272.
 Umā-Maheśvara 173.
 umbrella-stone 37.
 Umri 166.
 Un 175.
 Undavalli 129, 138, 139.
 Ūparkoṭ 118.
 Ur 6.
Ūrdhvapaṭa 102.
 urns 20, 23, 25, 26, 34, 35, 37,
 38, 62.
Ushṇīsha 103.
 Ustād 'Isā 318.
 Utnur 36.
 Uttiramerur 221.

INDEX

V

Vaḍakkunnāthan 347.
 Vaḍathikā 111.
 Vadnagar 180, 182.
 Vahiyakā 111.
 Vaibhāra 61.
 Vaikunṭha-perumāḷ 219, 221, 240.
 Vaiśālī 46, 66, 67, 86, 89, 346.
 Vaishṇava 153, 170, 174, 189, 228, 345.
 Vaitāl-deul 185.
 Vajrayāna 97.
 Vākāṭakas 124, 346.
 Valabhī 178, 351.
 Valaiyaṅkuṭṭai-ratha 149-51.
 Vāliśvara 221.
 Vallam 141, 142.
 Vāmana 178.
 Vamsadhara 100.
 Varadarāja 237.
 Varāha 131, 145, 158, 168, 176, 179.
 Varāha-maṇḍapam 145.
 Varanasi 15, 16, 46, 57, 87, 353, 354.
 Varman 169.
 Varuṇa 57, 58.
 Vāsudeva 53, 82, 158.
 Vātāpi 132, 192.
 Vatsa 2, 44, 46, 53, 96.
 Vedagirīśvara 215.
vedikā 88, 122.
 Vellore 236, 239.
 Vima Kadphises 344.
 Veṅgī 139, 203.
 Veṇuvana 61.
 Veṇvā 70.
 Veṭṭuvāṅkovil 153, 154.
 Victoria, Queen, 333, 352.
 Victoria and Albert Museum 351.

Victoria Memorial Hall Museum 351.
 Vidiśā, Vidisha 46, 72, 130, 166, 175.
vidyā-devīs 172.
vidyādhara 126, 159, 180, 342.
 Vidyadharapuram 107.
 Vijayāditya 200.
 Vijayālayacholīśvaram 224.
 Vijayanagara 233-38, 327, 344, 348.
 Vijaya-Nārāyaṇa 210.
 Vijayawada 101, 107, 129, 138, 139, 333.
 Vikramāditya II 196, 200.
 Vilappakkam 142.
 Vimala-Vasahi 171.
 Vindhyan, Vindhya 16, 17, 36, 39, 280.
 Vipulaśrīmītra 350.
 Viramgam 182.
 Virāṭeśvara 173.
 Virāṭtāneśvara 221.
 Virūpāksha 199-201, 203, 237.
 Visakhapatnam 101, 121.
 Visalur 222.
 Visawada 179.
 Viṣṇu 132, 139-42, 145, 146, 153, 159, 180, 192, 213, 215-19, 233, 248.
 Viṣṇuvardhana 210, 226.
 Viśvakarmā 126.
 Viśvanātha 178.
 Viṭṭhala 238.
 Vodāmayūtā 51.
vyālas 122, 144, 145, 150, 169, 186, 187, 216.

W

Wadhwan 180.
 Wallich, Nathaniel, 331.
 Warangal 213, 291.
 Wardha 26.

INDEX

Wellesley 352.
 West Asia 11.
 Western Gaṅgas 225.
 West Khandesh 23.
 West Nimar 72, 175.
 Wheeler, M., 83, 337.
 White Bein 7.
 Woolley, Leonard, 334.

Y

Yādavas 344.
yaksha 49, 340, 343.
yakshī 166, 343, 346, 348.
 Yale-Cambridge Expedition 340
 Yamuna 10, 13, 17, 22, 45,
 53, 70, 124, 131, 163, 258,
 304, 307, 318, 319, 342.

Yaśovarmadeva 350.
 Yaudheya 53.
 Yelleswaram 30, 38, 343.
 Yoga-Nandīśvara 227.
yoginīs 173.
 Yūsuf 'Ādil Shāh 288.

Z

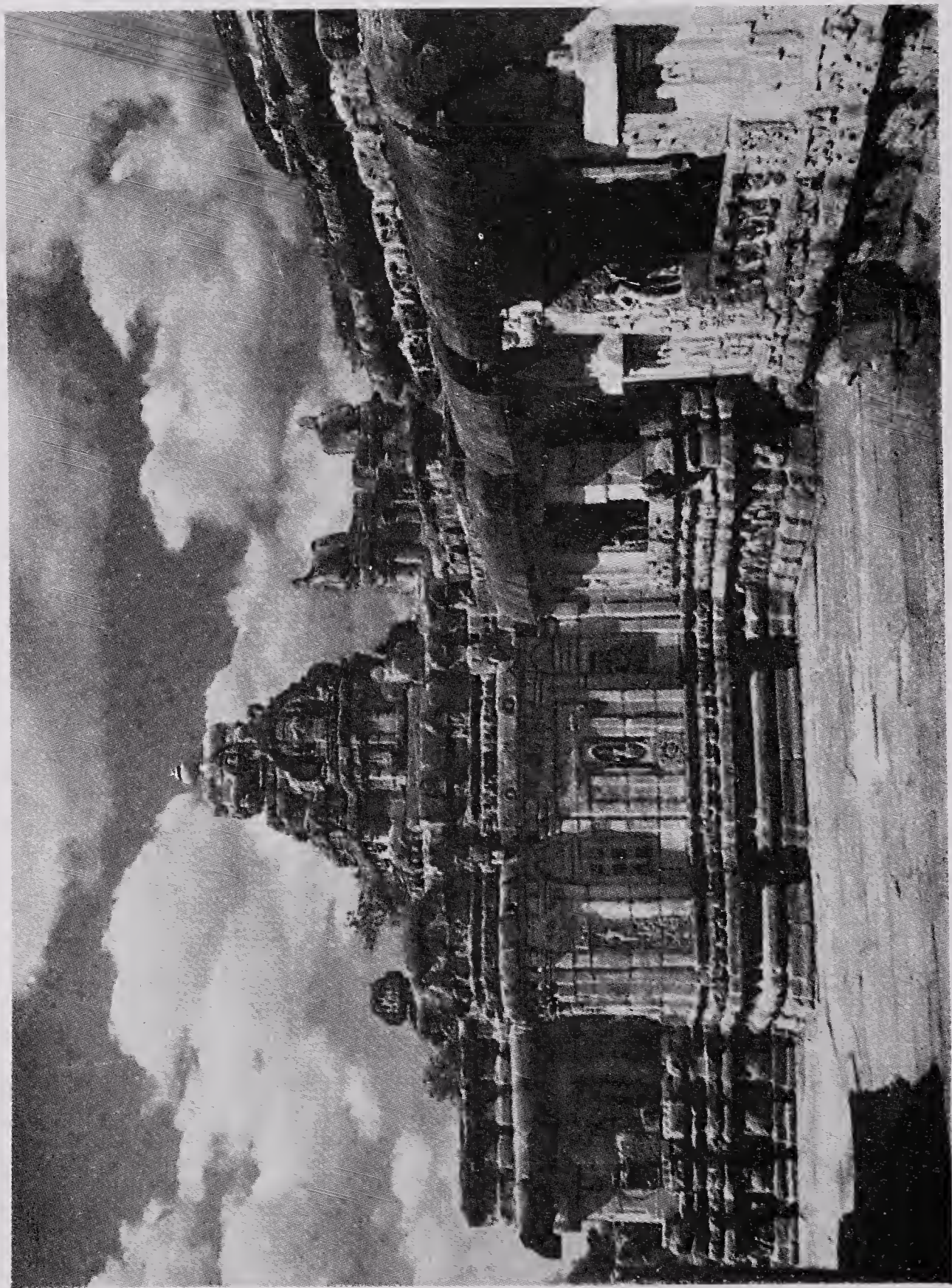
Zafar Khān 271, 283.
 Zafar Khān Ghāzī 265.
 Zafar-Maḥal 321.
 Zainu'l-Ābidīn 295, 296.
 Zanāna-Maḥal 286.
zariḥ 244.
 Zhob 5.
 Zīnatu'l-Masājid 323.
 Zīnatu'n-Nisā Begam 323.

PLATES

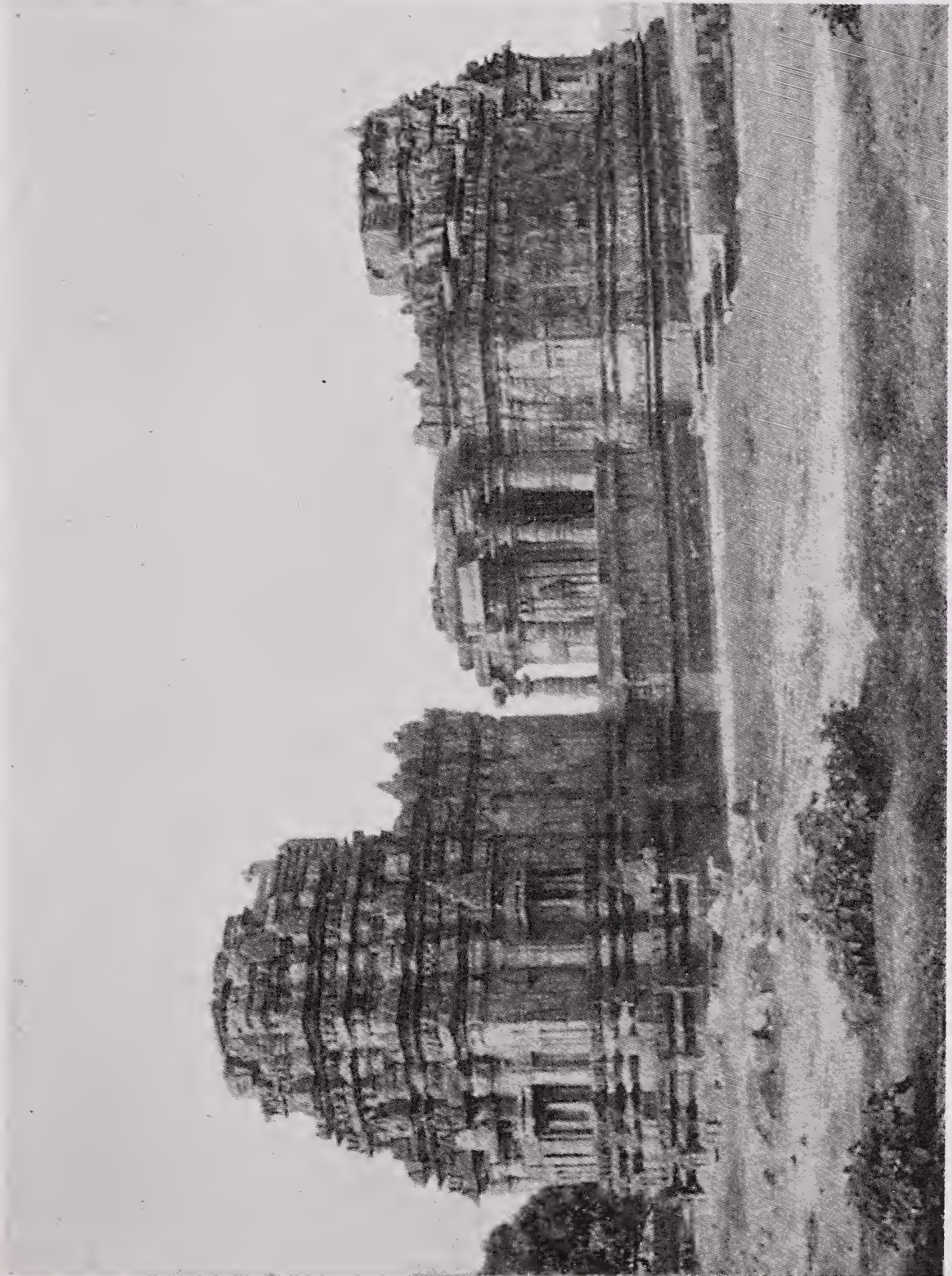


Badami: Mālegitti-Śivālaya. See .p 197

PLATE LX

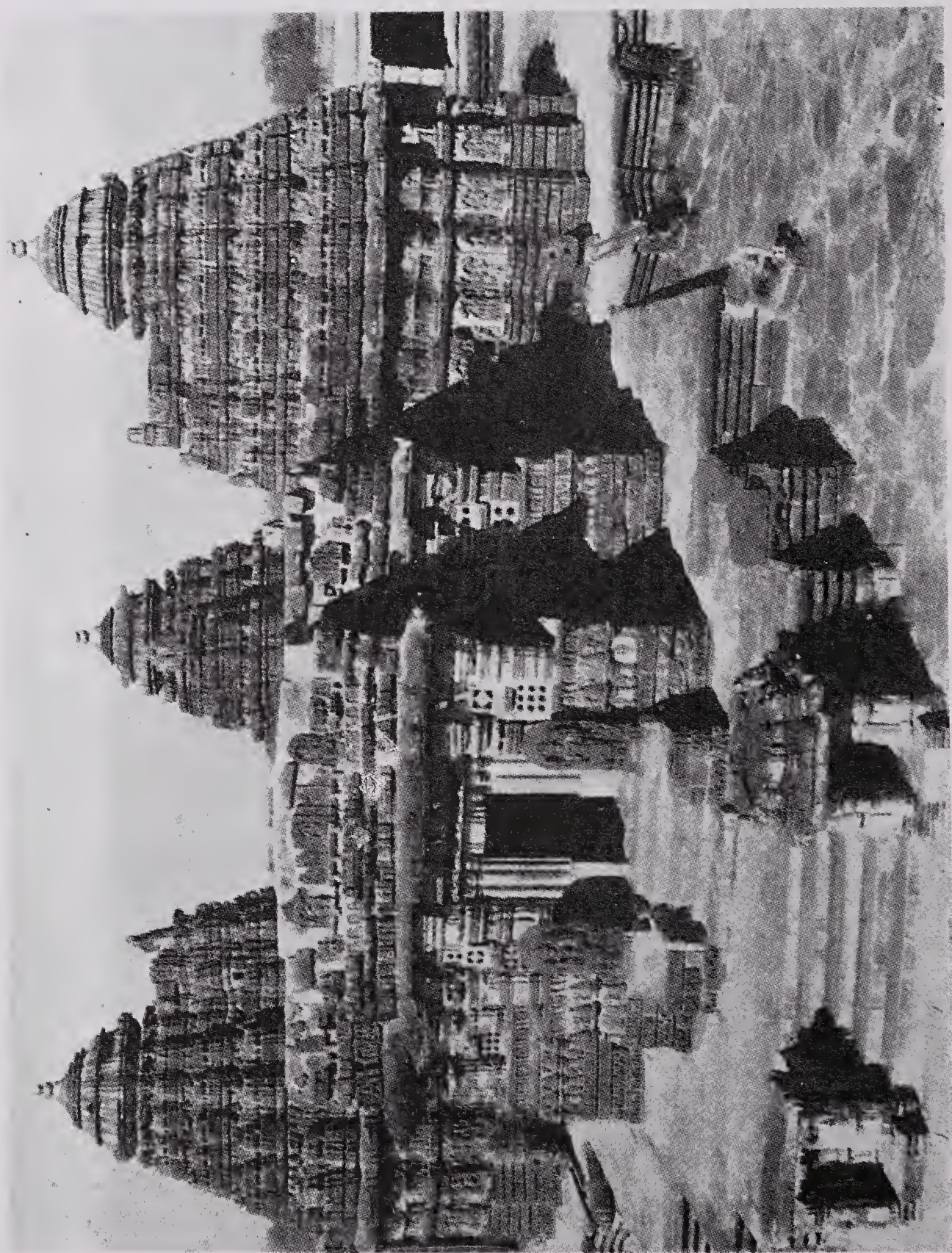


Patadkal: Virūpāksha temple. See p. 201



Lakkundi: Kāśī Viśveśvara temple. See p. 208

PLATE LXII



Somnathpur: Kesava temple. See p. 212

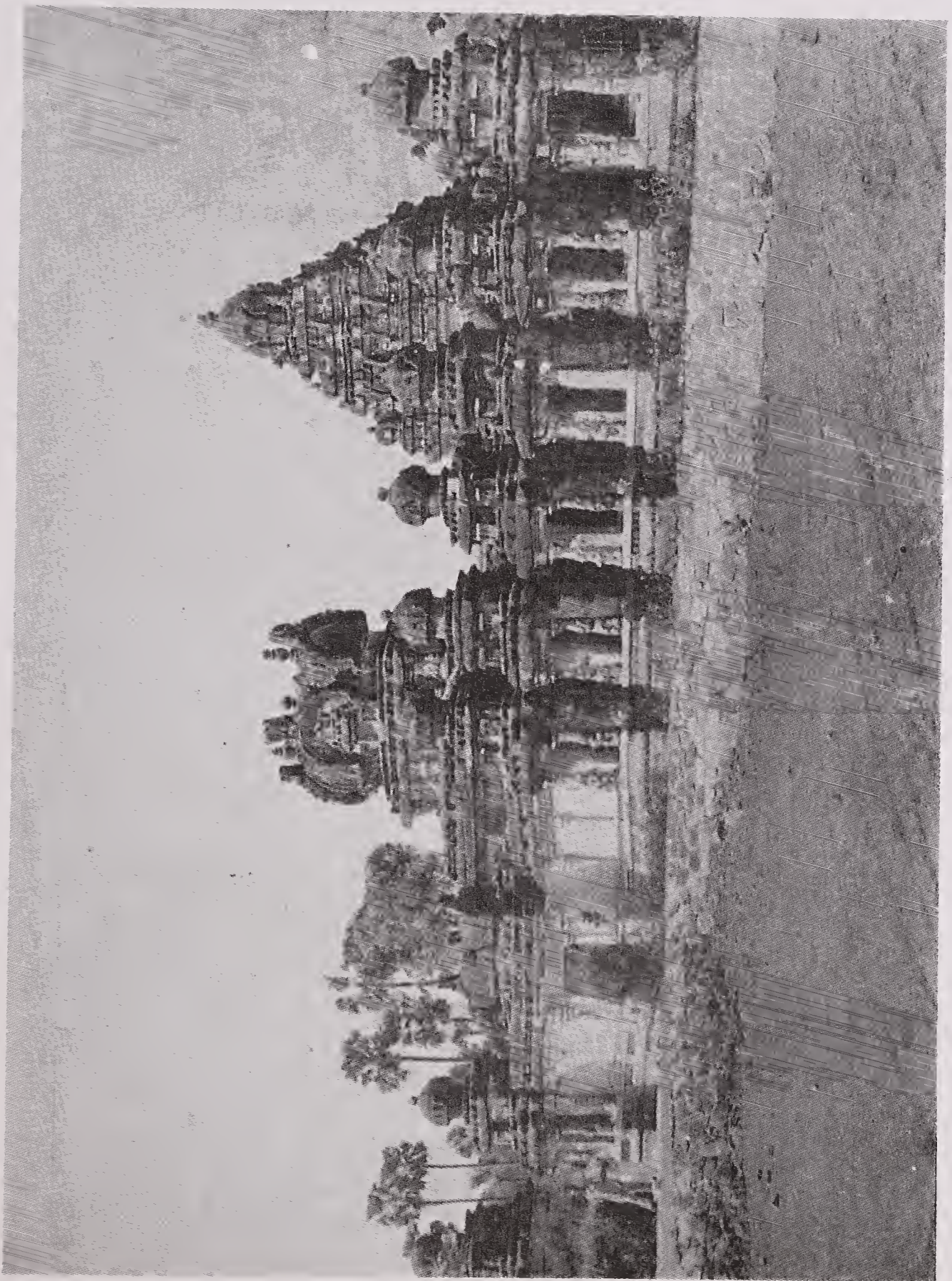


Warangal: toraṇa of a ruined temple within fort. See p. 213

PLATE LXIV

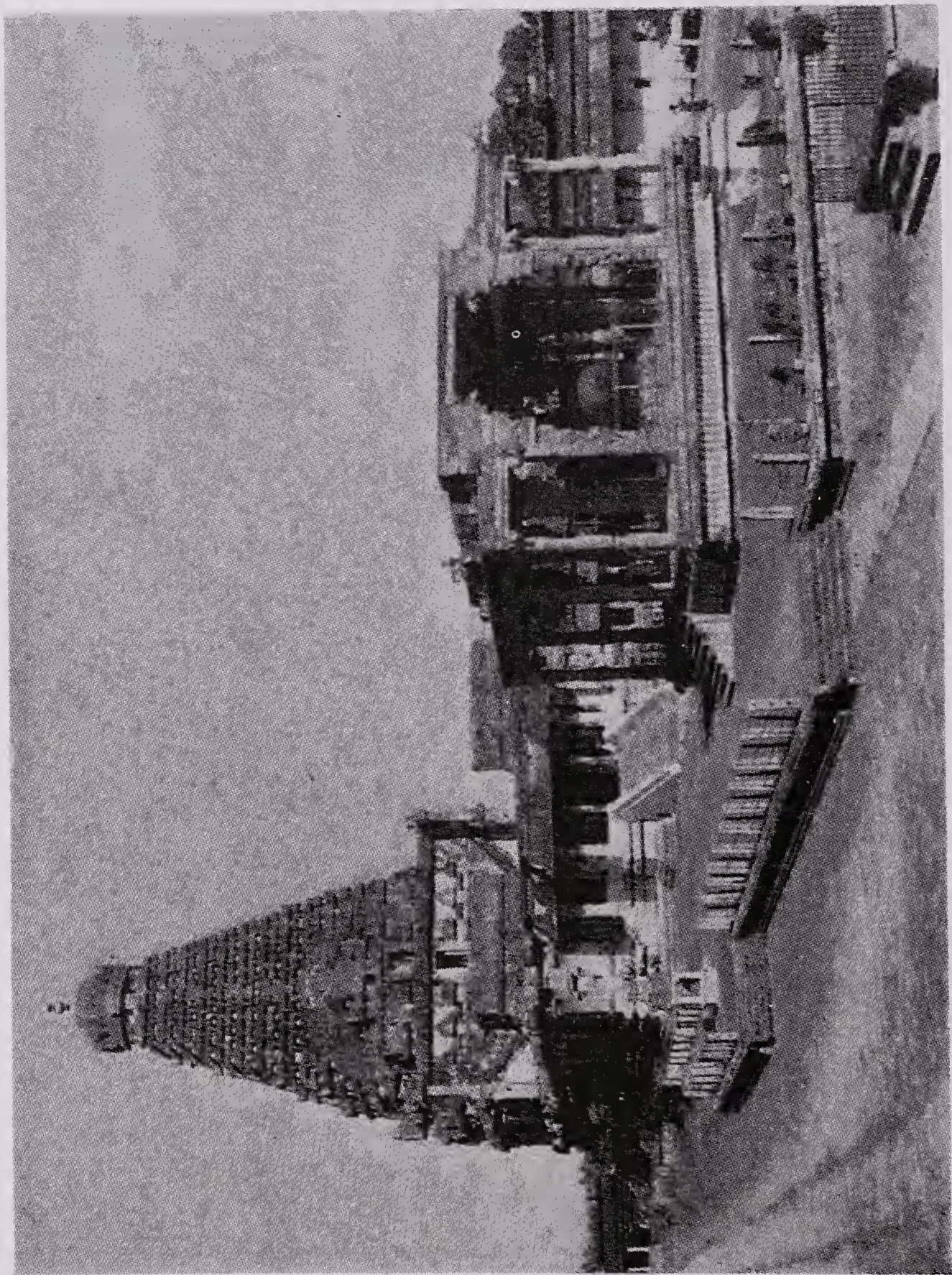


Mahabalipuram: Shore-temple. See p. 215



Kanchipuram: Kailāsanātha temple. See p. 217

PLATE LXVI

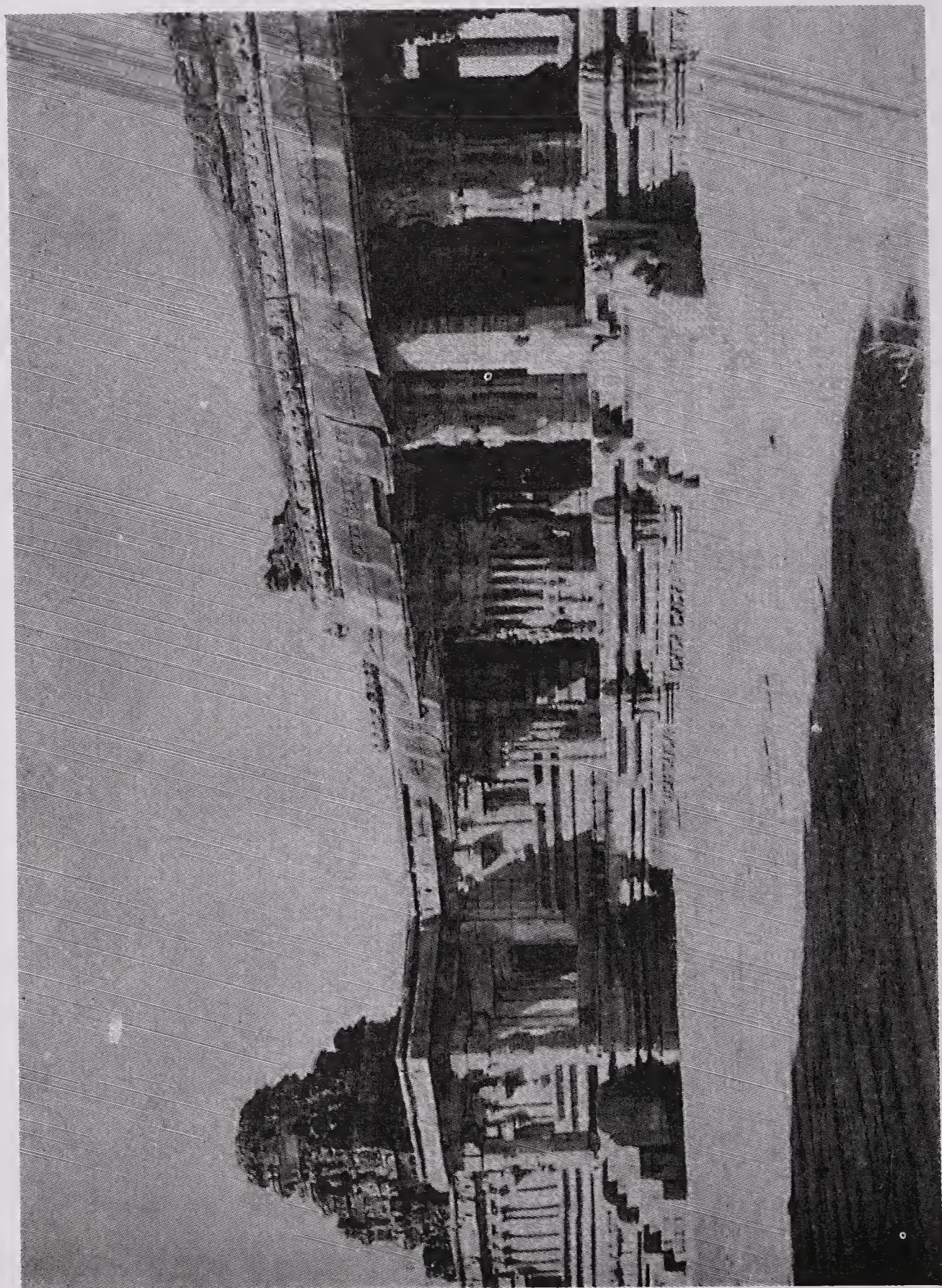


Thanjavur: Brihadīśvara temple. See p. 229



Darasuram : Airāvateśvara temple. See p. 223

PLATE LXVIII

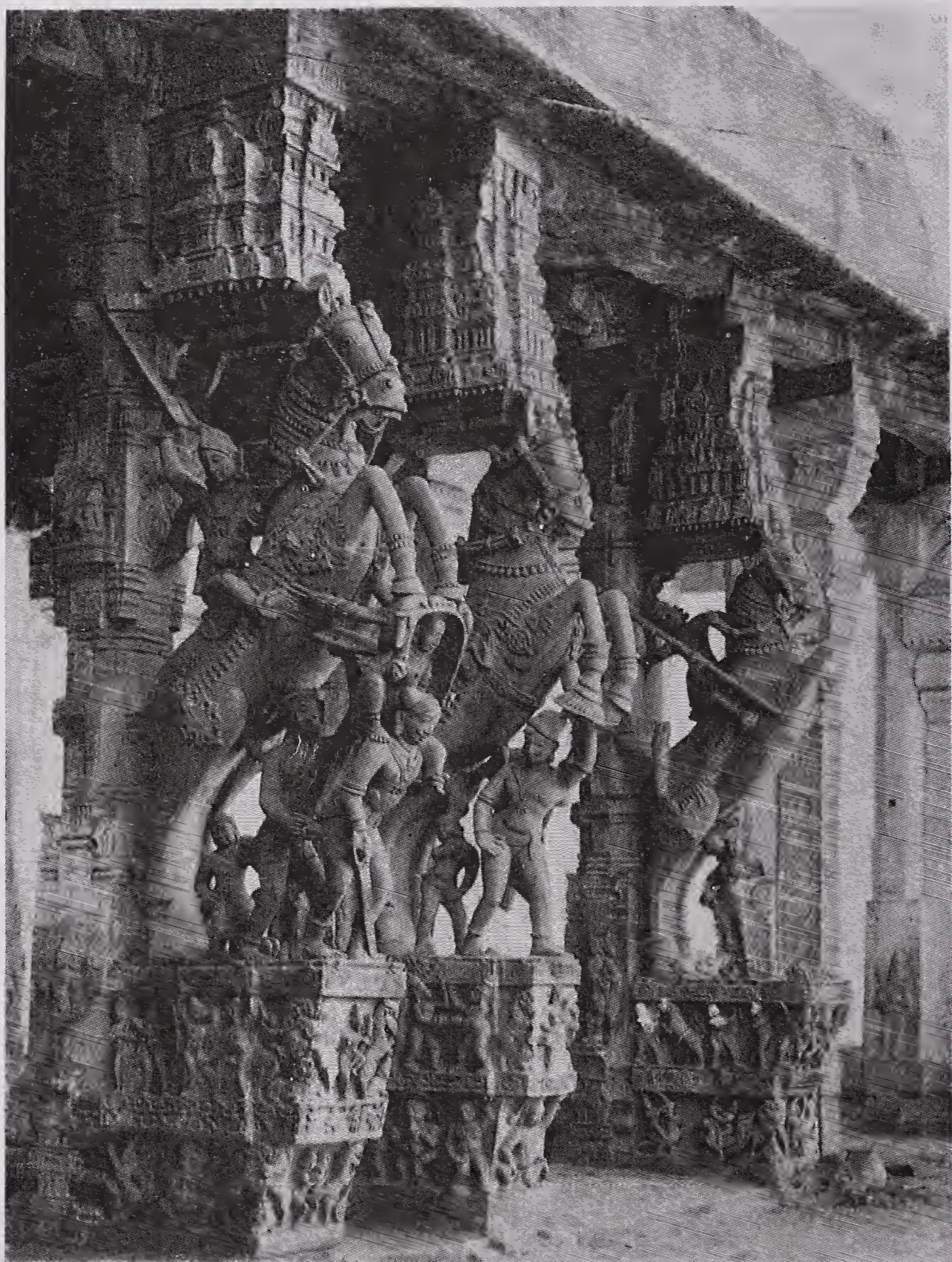


Hampi : Vijay Vittala temple. See p. 238

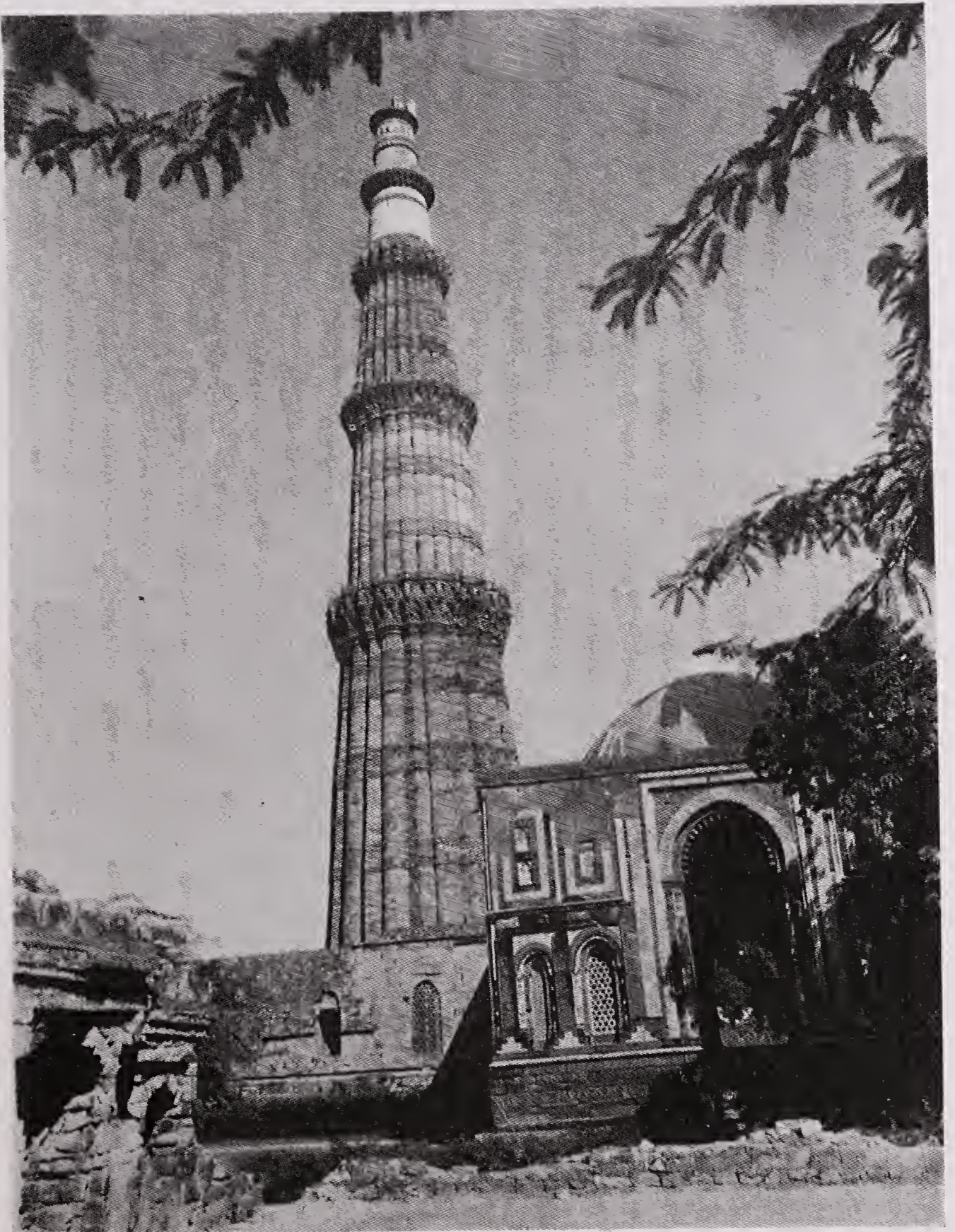


Vellore : gopuram. See p. 239

PLATE LXX



*Srirangam : façade-columns of maṇḍapa with monolithic sculptures.
See p. 239*



Delhi : Qutb-Minār. See pp.

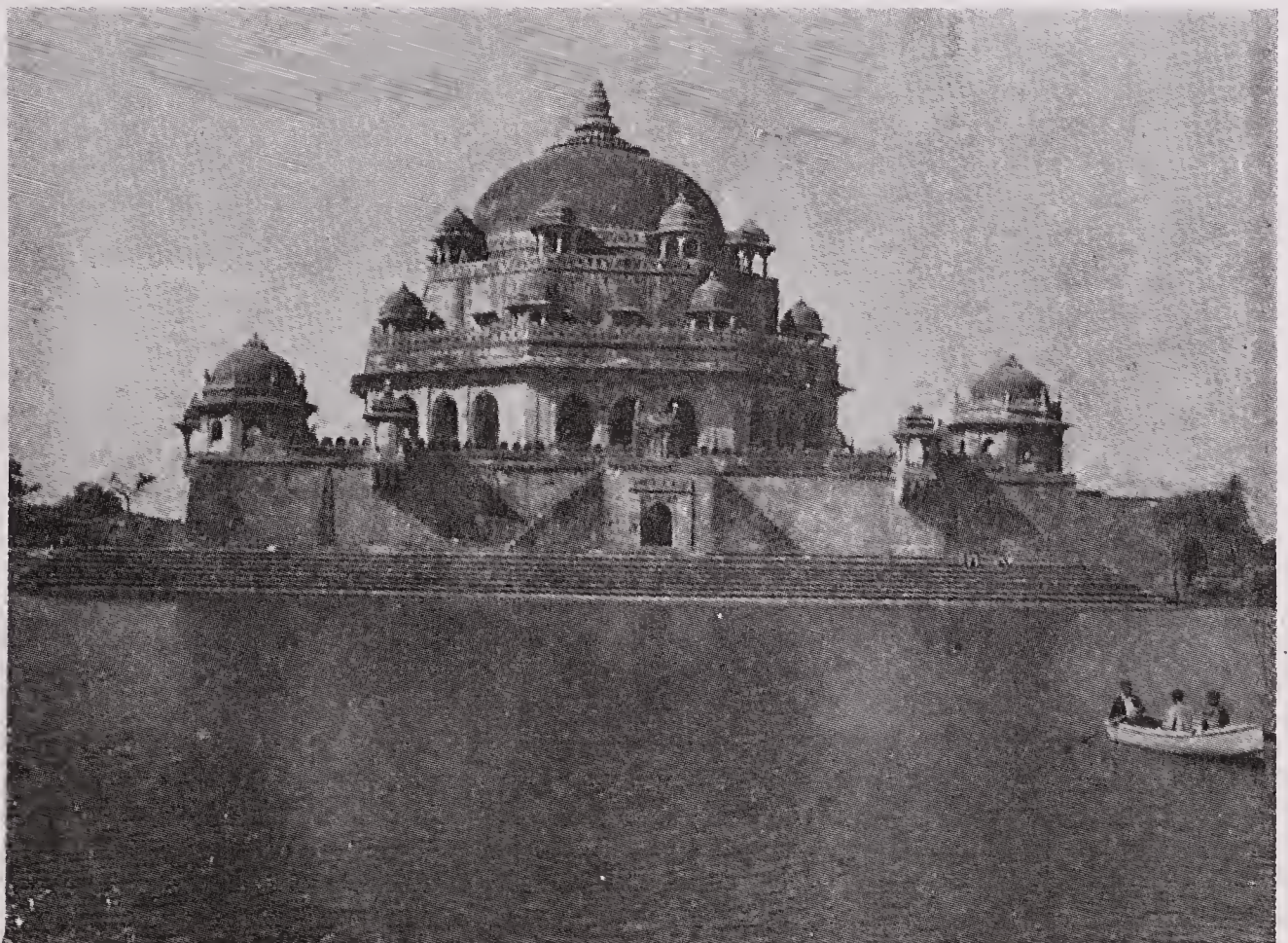
PLATE LXXII



Ajmer : Arhāi-Din-kā-Jhonprā. See p. 249



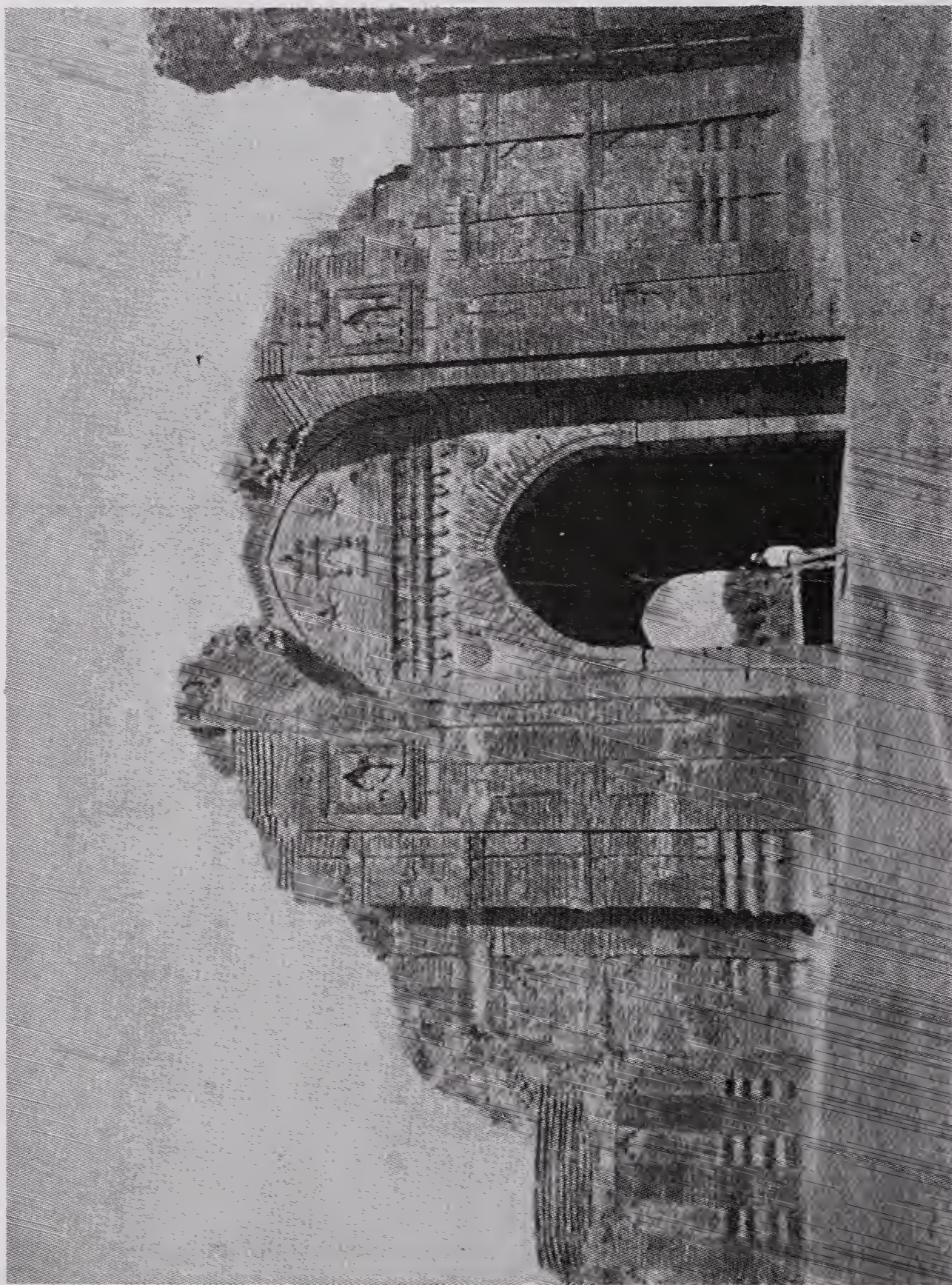
A



B

A, Narnaul: *Ibrāhīm Khān's tomb*; B, Sasaram: *Sher Shāh's tomb*. See p. 300

PLATE LXXIV

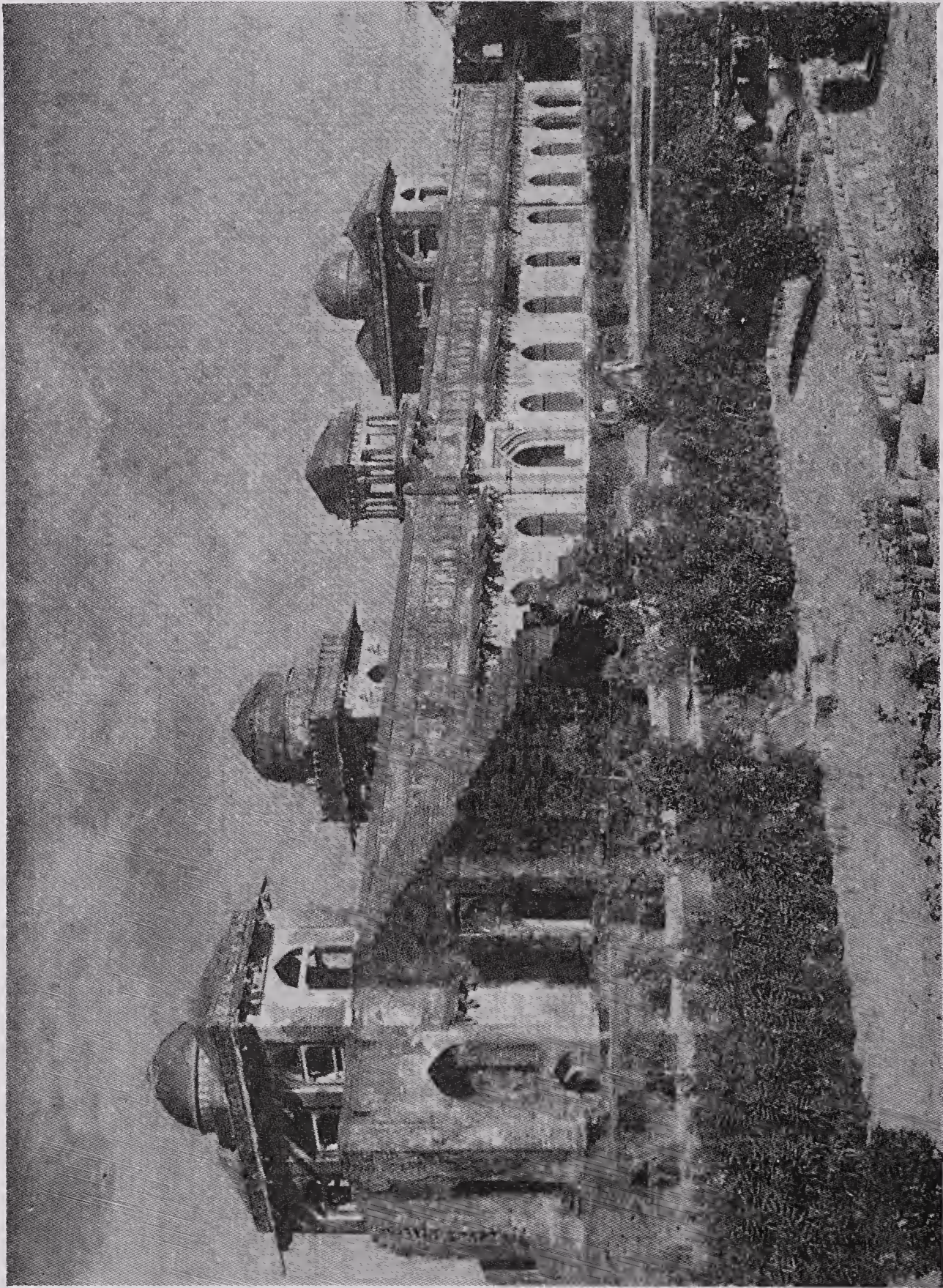


Gaur : Dākhil-Darwāza. See p. 267

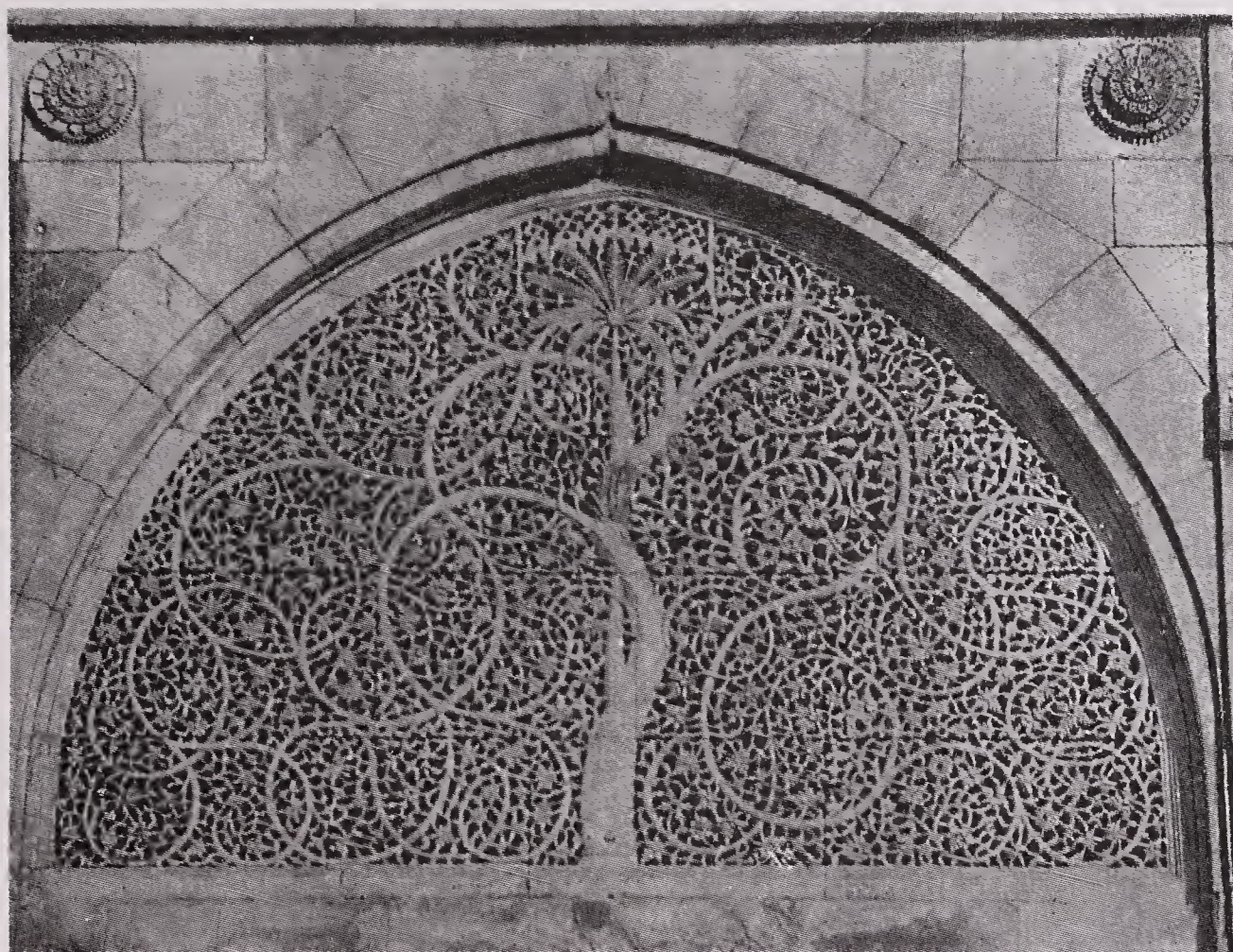


Jaunpur : Atāla-Masjid. See p. 270

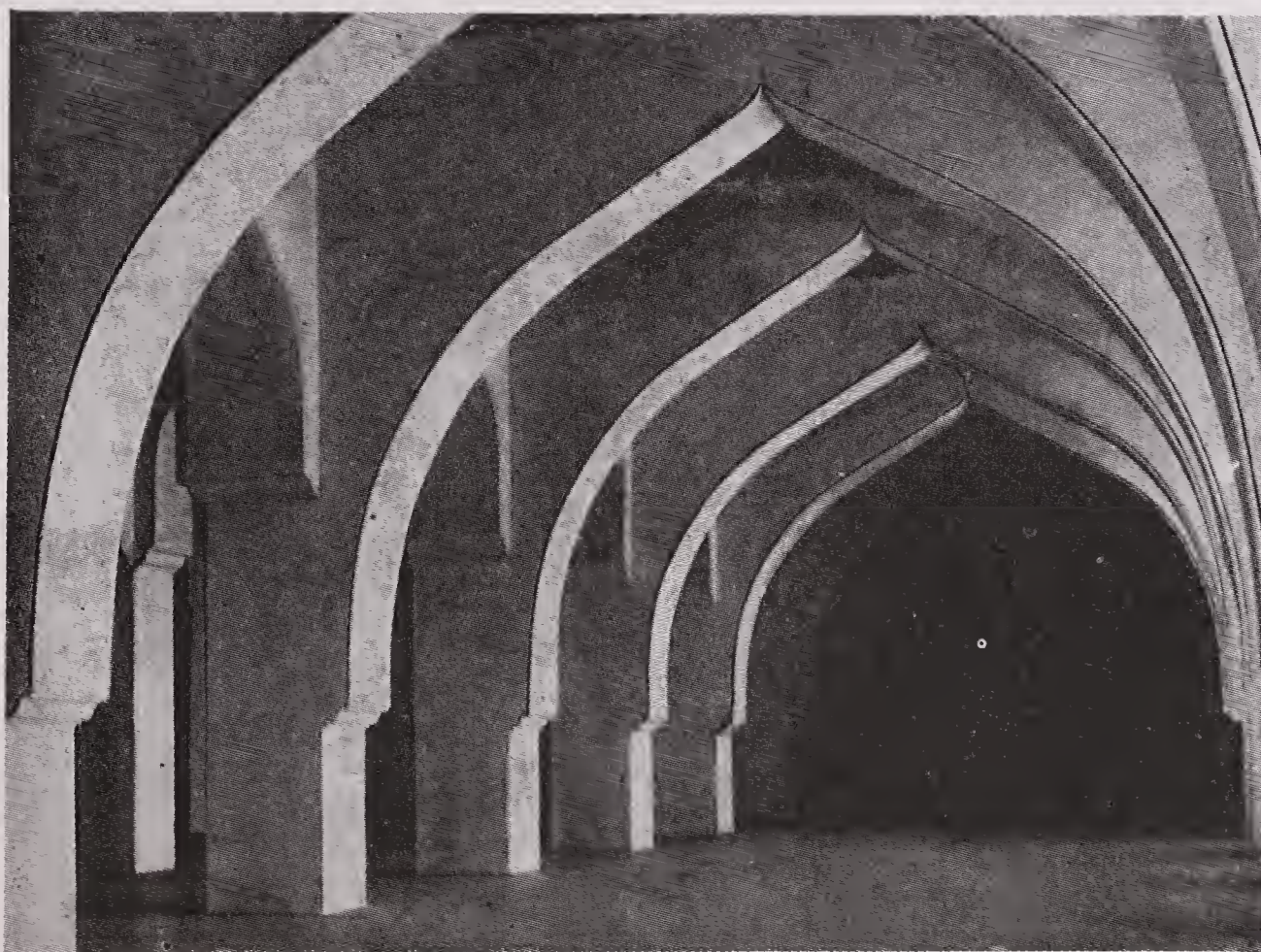
PLATE LXXVI



Mandu : Jahāz-Mahāl. See p. 282



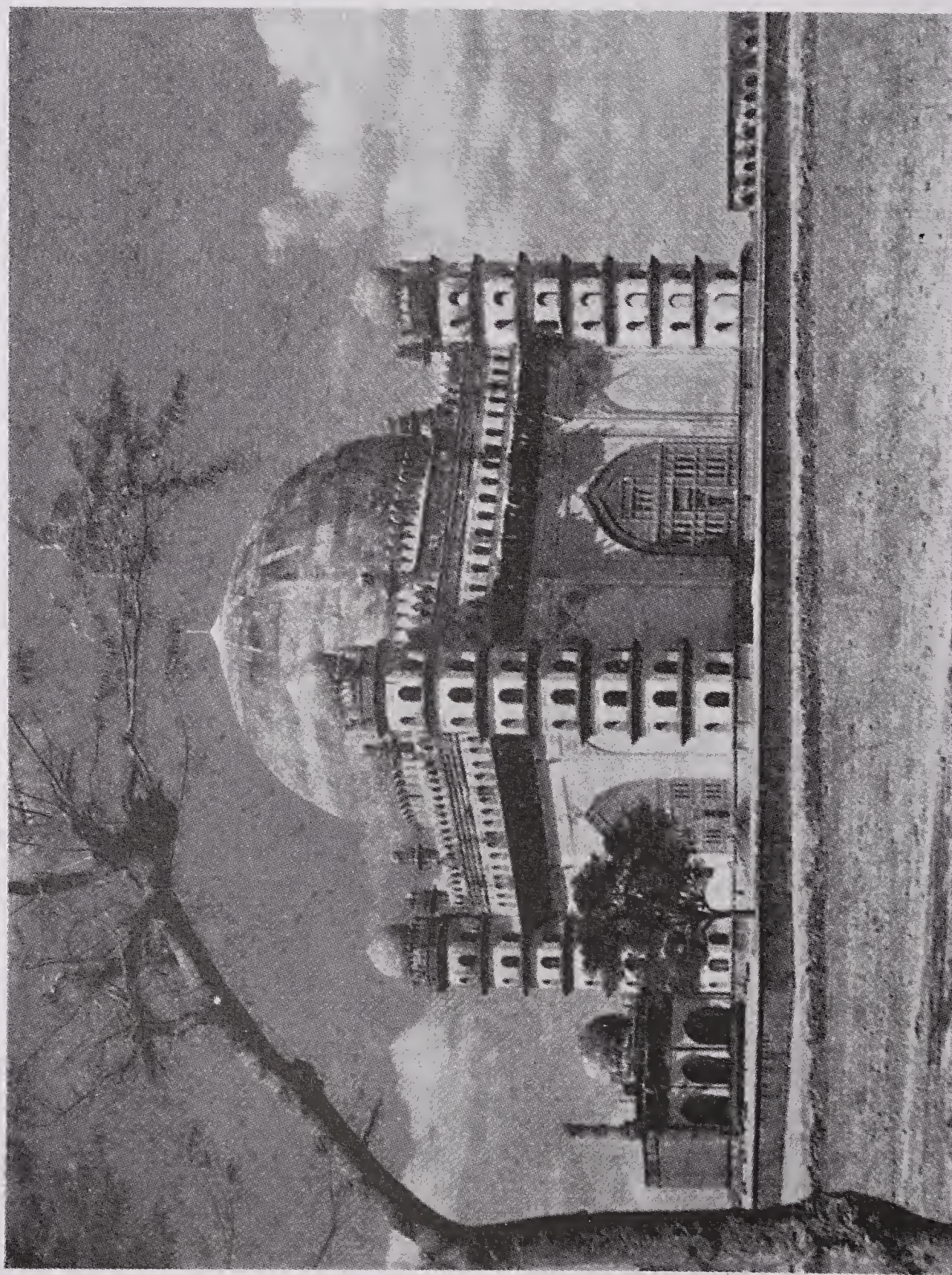
A



B

A, Ahmadabad : a screen in Sidi Sa'id's mosque; B, Gulbarga : cloisters of Jāmi'-Masjid. See pp. 277 and 285

PLATE LXXVIII



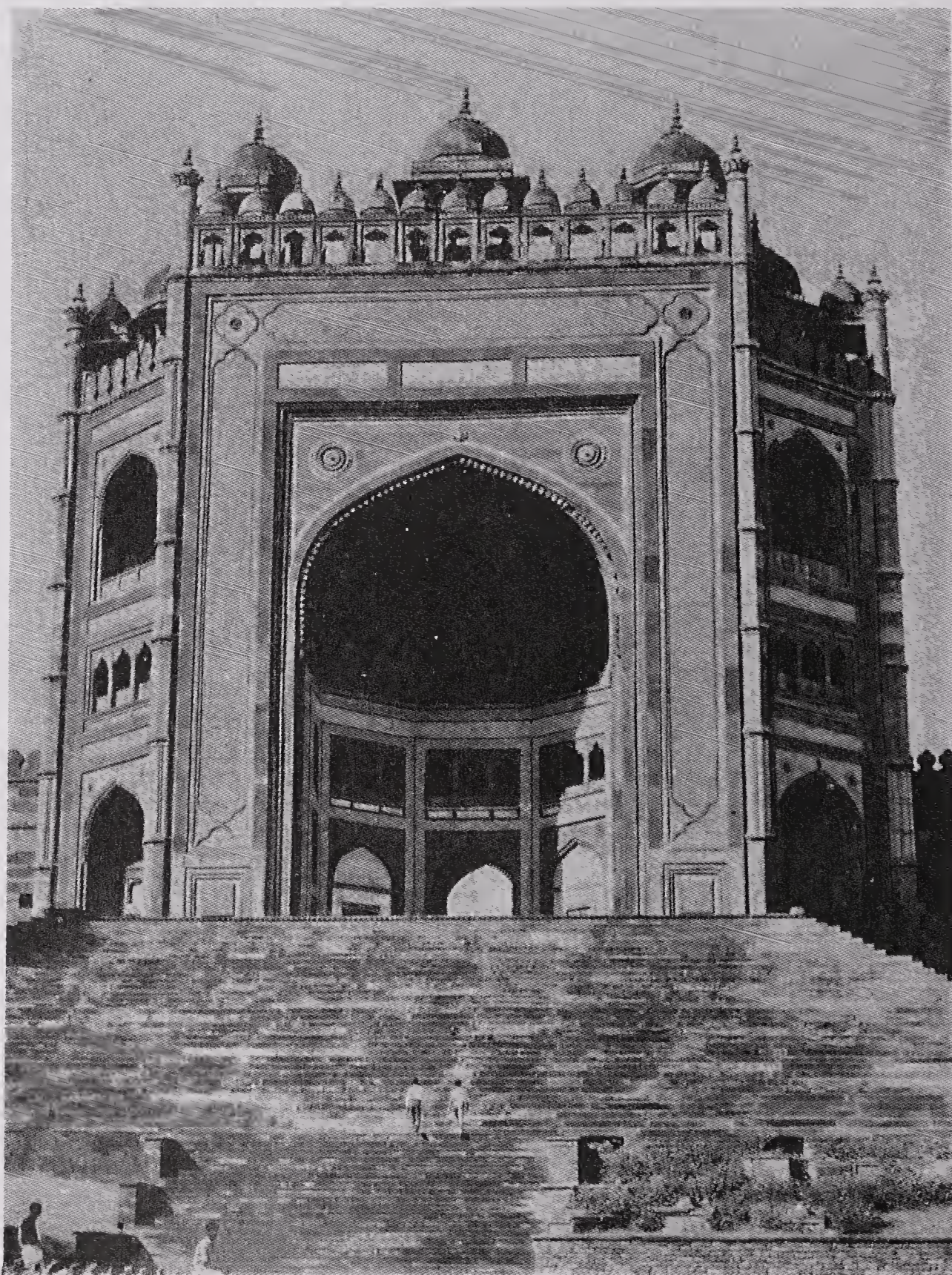
Bijapur : Gol-Gumbad. See p. 290

PLATE LXXIX

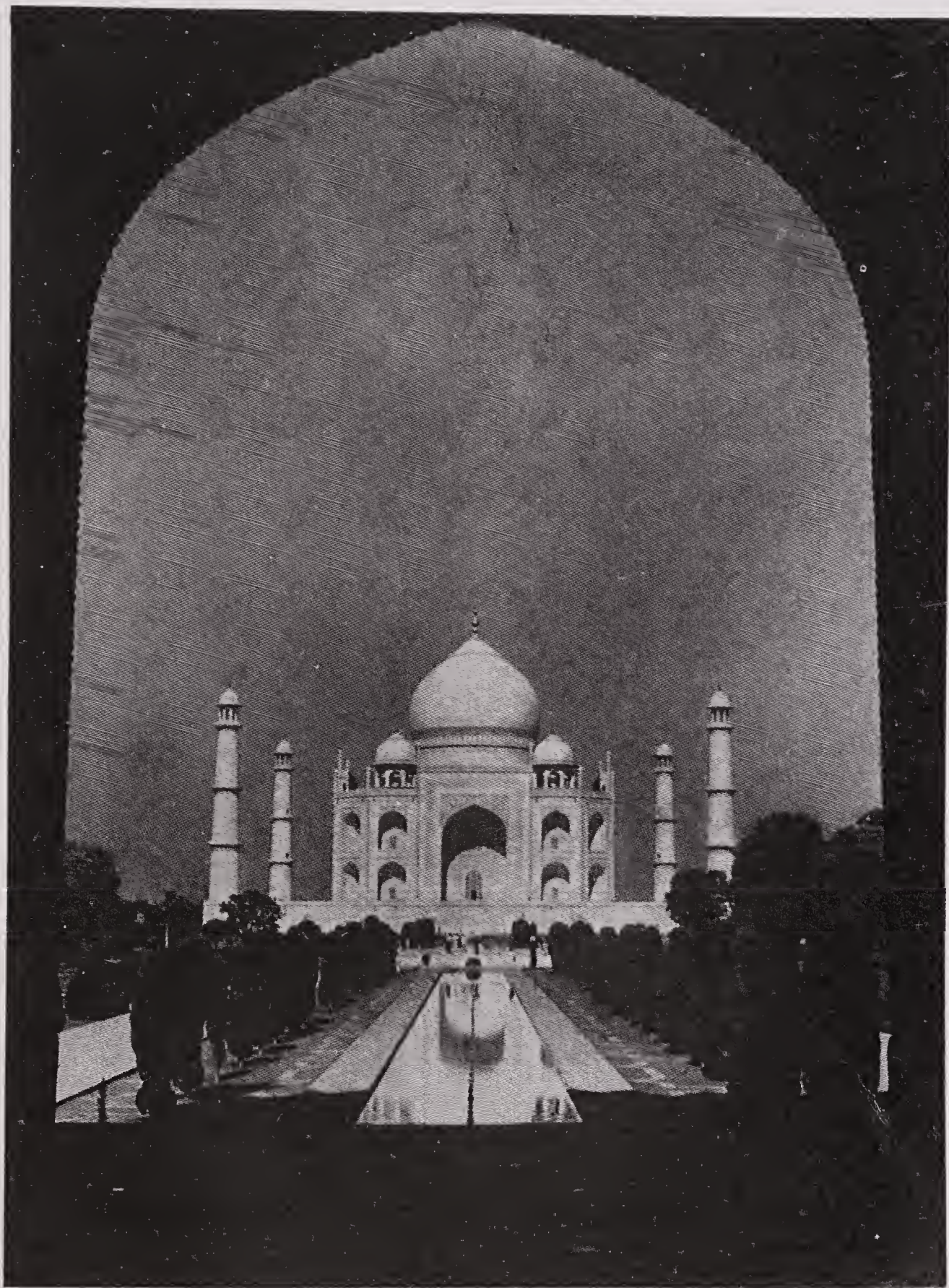


Agra : fort, Jahāngirī-Mahal. See p. 308

PLATE LXXX

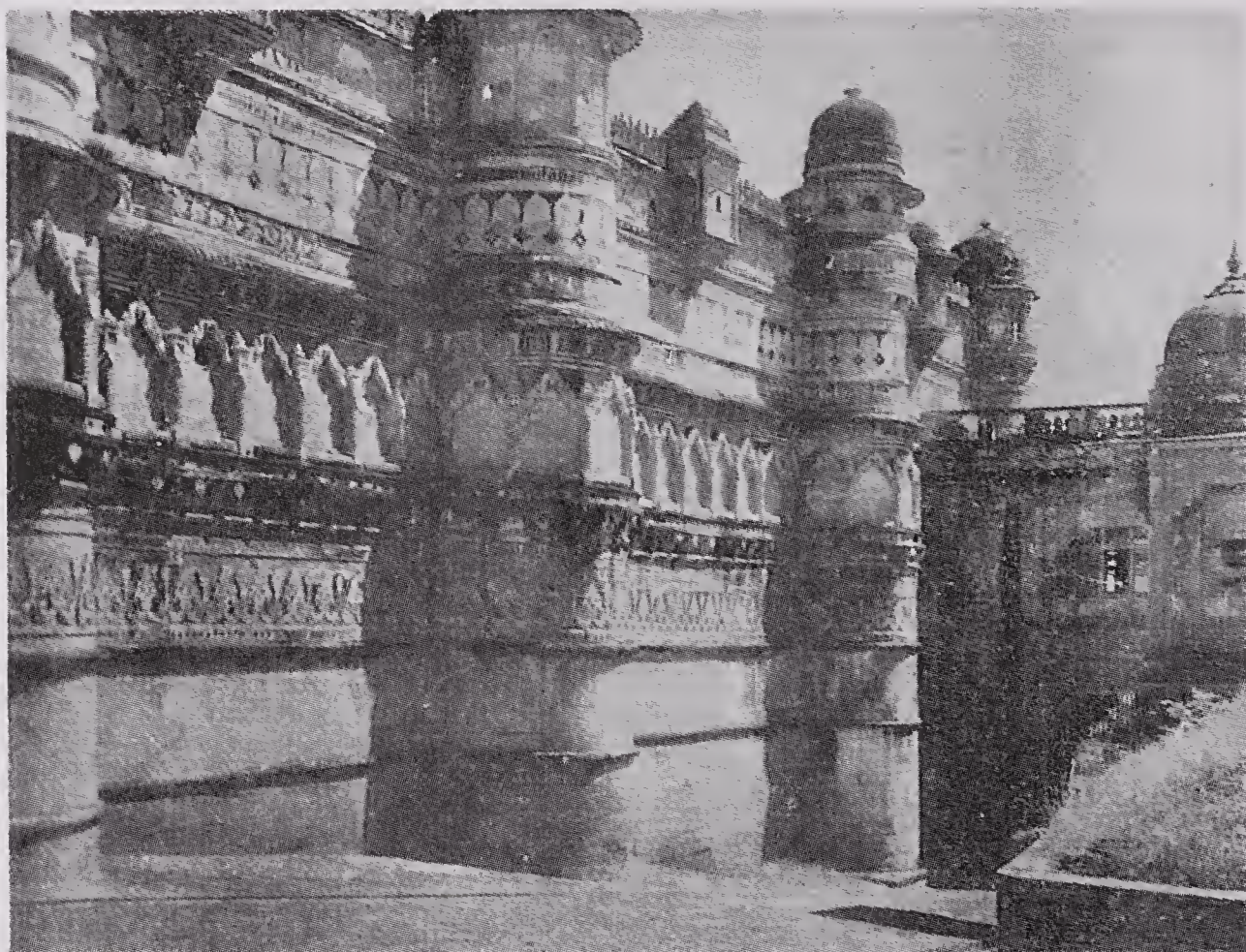


Fatehpur Sikri : Jāmi'-Masjid, Baland-Darwāza. See p. 311

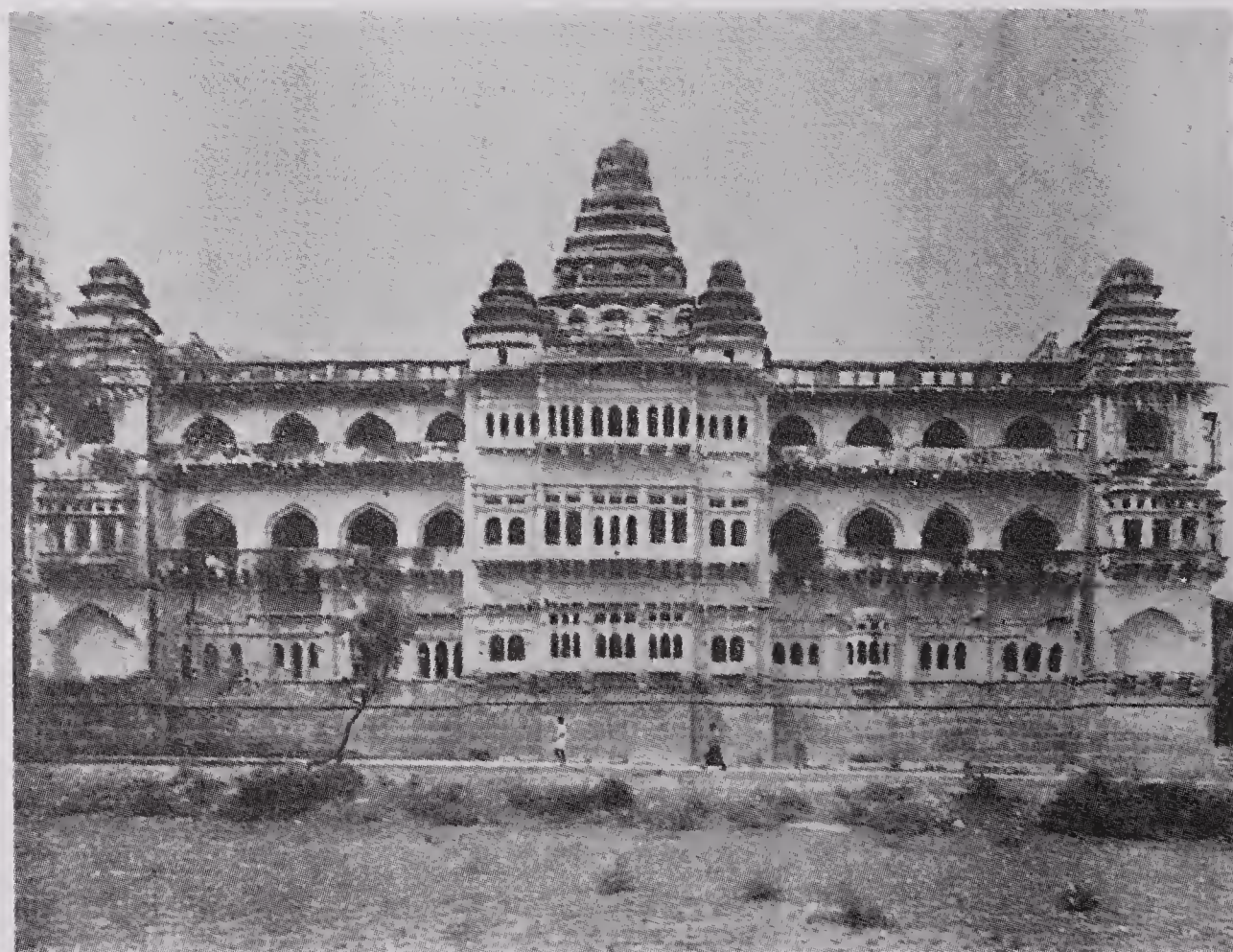


Agra: Tāj-Mahal. See p. 317

PLATE LXXXII



A



B

A, Gwalior: fort, exterior view; B, Chandragiri: palace.
See pp. 327



Archaeological Museum, Sarnath : lion-capital of Aśoka, Sarnath, third century B. C. See p. 350



Indian Museum, Calcutta (now in Rashtrapati Bhavan, New Delhi) : bull-capital of Aśoka, Rampurwa, third century B. C. See p. 340



A



B

A, Indian Museum, Calcutta: yakshi on Bharhut railing, second century B.C.; B, Archaeological Museum, Amaravati : yakshi, Amaravati, second century, B.C. See pp. 341 and 348



A



B



C

A, *Bharat Kala Bhavan, Varanasi* : *prasādhikā* with toilet-articles, Mathura school, second century;
 B, *Indian Museum, Calcutta* : *Buddha*, Gandhāra school, second century; C, *National Museum, New Delhi* : *bathing woman*, Mathura, second century. See pp. 341, 342 and 353



Archaeological Museum, Nagarjunakonda : Māra's attack and retreat followed by a mithuna-panel, Nagarjunakonda, third century. See p. 349



Archaeological Museum, Sarnath : preaching Buddha, Sarnath, fifth century. See p. 350



National Museum, New Delhi: terracotta Gaṅgā, Ahichchhatrā, sixth century. See p. 342



*Government Museum, Madras: bronze Vishāpaharaṇa-Śiva,
Kilappuddanur, eighth century. See p. 345*



A

A, Archaeological Museum, Gwalior: dance-scene, Pawaya, fifth century; B, National Museum, New Delhi: flying vidyādhara, Aihole, seventh century. See pp. 342 and 343



B

PLATE XCII



A



B

A, Baroda Museum, Baroda: bronze churi-bearer, Akota, seventh century; B, Patna Museum, Patna: bronze Avalokiteśvara, Kurkihar, ninth century. See p. 342 and 346



Indian Museum, Calcutta: mother and child, Khajuraho, eleventh century. See p. 341

PLATE XCIV



A



B

A, *Indian Museum, Calcutta: Kārttikeya, Rajshahi, twelfth century;*
B, *Archaeological Museum, Helebid: Govardhanadhāri, Helebid,*
twelfth-thirteenth century. See pp. 341 and 348



Art-gallery, Thanjavur: bronze Vrishavāhana and Devi, Tiruvengadu, eleventh century. See p. 340

PLATE XCVI



Government Museum, Madras: bronze Natarāja, Tiruvalangadu, eleventh century. See p. 345

SOAB 3/98



ARCHAEOLOGICAL SURVEY OF INDIA